

**RESOLUTION OF CONSTRUCTION DISPUTES ARISING FROM MAJOR
INFRASTRUCTURE PROJECTS IN DEVELOPING COUNTRIES – CASE STUDY
OF GHANA**

Joseph Mante

PhD

September

2014

**RESOLUTION OF CONSTRUCTION DISPUTES ARISING FROM MAJOR
INFRASTRUCTURE PROJECTS IN DEVELOPING COUNTRIES – CASE STUDY
OF GHANA**

JOSEPH MANTE, LLB (Hons), LL.M, BL

A thesis submitted in partial fulfilment of the
requirements of the University of Wolverhampton
for the degree of Doctor of Philosophy

September, 2014

This work or any part thereof has not previously been presented in any form to the University or to any other body whether for the purposes of assessment, publication or for any other purpose (unless otherwise indicated). Save for any express acknowledgments, references and/or bibliographies cited in the work, I confirm that the intellectual content of the work is the result of my own efforts and no other person.

The right of Joseph Mante to be identified as author of this work is asserted in accordance with ss.77 and 78 of the Copyright, Designs and Patents Act 1988. At this date copyright is owned by the author.

Signature :

Date : 10 September 2014

ABSTRACT

This study undertook a critical examination of developing countries' experiences of infrastructure-related construction dispute resolution using Ghana as a case study. It investigated the dispute resolution processes and procedures which parties to infrastructure construction disputes employed to address such disputes. To gain a better understanding of the dispute resolution processes, the study also assessed the legal framework for procurement and contract formation and other contextual issues which influenced parties' dispute resolution choices. Consequently, strategies for efficient and effective dispute resolution were developed. The main rationale for the study was the need for effective and efficient dispute resolution processes in the context of infrastructure projects in developing countries. The literature indicated that disputes often occurred on such projects in developing countries that were resolved at great cost mainly by arbitral tribunals in the developed world. However, there was limited information on the extent to which other dispute resolution mechanisms were utilised prior to resort to international arbitration.

The study adopted a qualitative research approach informed by the interpretivist philosophical paradigm. Data was collected from fifty-six interviewees from the State as the Employer and foreign contractors through semi-structured interviews and documents and analysed using qualitative data analysis procedures associated with grounded theory research such as coding, constant comparison, memoing and diagramming, and doctrinal legal analysis. It was found that engineer's determination, negotiation and international arbitration were the most used dispute resolution mechanisms. Others such as mediation were rarely used. The dispute resolution processes were characterised by high cost, low satisfaction with outcomes and negative effect on relationships. It was also found that the extant dispute resolution processes were the product of the nature of the parties, the context in which they operated and their responses to the context. Factors such as lack of coordination among the Employer's sub-units, human resource constraints and political interference had varying negative impacts on dispute occurrence, dispute resolution system design and the dispute resolution processes.

To deal with these challenges and achieve efficient and effective dispute resolution processes, four sets of remedial strategies (condensed into a model called the Dispute Resolution Efficiency Cycle (DREC)) were proposed. The study has provided empirical evidence which has addressed some of the gaps identified in the literature on issues such as absence of information on pre-international arbitration dispute processes. The study has also highlighted the impact of context and dispute system design on dispute resolution. Contributions to practice included diagnosing challenges with the extant dispute resolution processes and proposing possible remedial strategies.

Keywords: Construction, Developing countries, Dispute resolution processes, Dispute Resolution Efficiency Cycle, Infrastructure development, Procurement

TABLE OF CONTENT

ABSTRACT	i
TABLE OF CONTENT	ii
LIST OF ABBREVIATIONS	x
LIST OF AUTHORITIES	xii
LIST OF FIGURES.....	xv
LIST OF TABLES	xvi
ACKNOWLEDGMENT.....	xvii
DEDICATION	xix
CHAPTER ONE - GENERAL INTRODUCTION	2
1.1. Introduction	2
1.2. Background of Study	2
1.3. Aim and Objectives	7
1.4. Research Methodology	8
1.5. Research Justification	12
1.6. Summary of Findings, Conclusions and Recommendations	13
1.6.1. <i>Extant Dispute Resolution Processes</i>	13
1.6.2. <i>Factors Accounting for the Extant Dispute Resolution Processes</i>	14
1.6.3. <i>Remedial Strategies</i>	16
1.6.4. <i>Implications of findings for other Developing Countries</i>	19
1.7. Scope and Limitation.....	19
1.8. Contribution to Knowledge	21
1.9. Structure of the Thesis.....	22
CHAPTER TWO-INFRASTRUCTURE DEVELOPMENT: CURRENT STATE AND TRENDS IN DEVELOPING COUNTRIES	26
2.1. Introduction	26
2.2. Nature and Characteristics of Infrastructure Projects.....	27
2.3. Infrastructure Projects in Developing Countries –Current trends	28
2.4. Infrastructure Development in Ghana – Current State and Trends	30
2.5. Funding Infrastructure Development	31
2.6. Infrastructure Development and Economic Development	33
2.7. Summary.....	35

CHAPTER THREE - PROCUREMENT OF MAJOR INFRASTRUCTURE

	PROJECTS IN GHANA	37
3.1.	Introduction	37
3.2.	Procurement- Definition	37
3.3.	Procurement Methods	38
3.3.1.	<i>The Traditional methods</i>	39
3.3.3.	<i>The Management-orientated Methods</i>	40
3.3.4.	<i>The Collaborative Procurement Methods</i>	41
3.4.	Procurement of Infrastructure projects in Ghana –Pre-Act663	41
3.5.	Procurement of Infrastructure – Post Act663	43
3.6.	Other rules on Infrastructure Procurement	44
3.7.	Procurement Practice	45
3.8.	Summary	45

CHAPTER FOUR - RESOLVING INFRASTRUCTURE-RELATED

	CONSTRUCTION DISPUTES	47
4.1.	Introduction	47
4.2.	Definition and Scope	48
4.2.1.	<i>Claims</i>	48
4.2.2.	<i>Dispute</i>	49
4.2.3.	<i>Overview of Causes of Construction Disputes</i>	52
4.3.	Major Construction Dispute Resolution - Options in Developed Countries ..	57
4.3.1.	<i>Dispute Avoidance and Management</i>	58
4.3.2.	<i>Negotiation</i>	60
4.3.3.	<i>Mediation and Conciliation</i>	61
4.3.4.	<i>Early Neutral Evaluation</i>	64
4.3.5.	<i>Dispute Boards</i>	64
4.3.6.	<i>Expert Determination</i>	67
4.3.7.	<i>Adjudication</i>	69
4.3.8.	<i>Arbitration</i>	70
4.4.	Developing Countries and Construction Dispute Resolution	71
4.4.1.	<i>Generic Problems with ICA</i>	73
4.4.2.	<i>Peculiar Concerns with ICA</i>	75
4.4.3.	<i>Resolving Major construction Disputes in Ghana</i>	75

4.5.	Knowledge Gaps	76
4.6.	Summary.....	77
CHAPTER FIVE - RESEARCH METHODOLOGY		79
5.1.	Introduction	79
5.2.	Epistemological Position	79
5.2.1.	<i>Positivism</i>	80
5.2.2.	<i>Interpretivism</i>	81
5.3.	Research Approaches	81
5.4.	Choice and Rationale for Epistemological Position and Research Approach	83
5.5.	Research Methodologies	85
5.6.	Research Methods	87
5.6.1.	<i>Data Collection Methods</i>	87
5.6.2.	<i>Data Analysis</i>	90
5.7.	Research Design	93
5.7.1.	<i>Case Design</i>	94
5.7.1.1.	<i>Case Selection and Justification</i>	95
5.7.1.2.	<i>Individuals and Groups relevant to the Study</i>	97
5.7.1.3.	<i>Sampling Techniques for the Selection of Participants</i>	98
5.7.2.	<i>Negotiating Access: Vertical/ Top-down and Horizontal Access Strategies</i> ..	98
5.7.3.	<i>Data Collection</i>	100
5.7.3.1.	<i>Semi-structured Interviews</i>	100
5.7.3.2.	<i>Pilot Study</i>	102
5.7.3.3.	<i>Documents</i>	103
5.7.4.	<i>Sample Size</i>	104
5.7.5.	<i>Data Analysis</i>	105
5.8.	Research Evaluation: Trustworthiness	106
5.9.	Summary.....	106
CHAPTER SIX - DATA ANALYSIS		109
6.1.	Introduction	109
6.2.	Background of Interviewees.....	109
6.3.	General Overview of the Data Analysis Strategy.....	112
6.4.	Preparing the Data for Analysis	113
6.5.	Coding	114

6.5.1.	<i>Open Coding</i>	115
6.5.2.	<i>Development of Categories</i>	117
6.5.3.	<i>Integration (Clustering Categories around the Core theme)</i>	121
6.6.	<i>Memo Writing</i>	127
6.6.1.	<i>Code Memos</i>	127
6.6.2.	<i>Methodological and Theoretical Memos</i>	127
6.7.	<i>Generation of Diagrams and Models</i>	128
6.8.	<i>Legal Analysis</i>	130
6.9.	<i>Summary</i>	131
CHAPTER SEVEN – RESULTS OF DATA ANALYSIS.....		134
7.1.	<i>Introduction</i>	134
7.2.	<i>Features and Context of Parties to Infrastructure-related Construction Disputes</i>	135
7.2.1.	<i>The Employer</i>	135
7.2.1.1.	<i>The Office of the President</i>	137
7.2.1.2.	<i>Government Ministries and Implementing Agencies</i>	138
7.2.1.3.	<i>Multiple functions and Operational Inefficiencies</i>	141
7.2.2.	<i>Relevant Contextual Issues</i>	147
7.2.2.1.	<i>Human Resource Concerns and Lack of Specialisation</i>	147
7.2.2.2.	<i>Political Interference and Corruption</i>	149
7.2.2.3.	<i>Fear of Blacklist</i>	151
7.2.2.4.	<i>Funding Major Infrastructure Projects</i>	153
7.2.3.	<i>Foreign Consultants and Contractors</i>	156
7.3.	<i>Procurement</i>	158
7.3.1.	<i>Procurement Rules and Methods in use</i>	159
7.3.2.	<i>The Contract Formation and Review Process</i>	161
7.3.2.1.	<i>Nominated Conditions of Contract</i>	161
7.3.2.2.	<i>Dispute Clauses</i>	163
7.3.2.3.	<i>Special Conditions: Negotiating Dispute Clauses</i>	165
7.3.2.4.	<i>Impact of Public law requirements on Construction Contract Formation</i> ..	166
7.3.3.	<i>Legal Institutions</i>	169
7.3.4.	<i>Use of Alternative Dispute Resolution</i>	171
7.3.5.	<i>Claim Events and Dispute Causes</i>	171

7.3.6.	<i>Settling Claims</i>	174
7.4.	Construction Disputes Resolution - Mechanisms and Procedure in Use	176
7.4.1.	<i>DRMs Regularly used</i>	176
7.4.1.1.	<i>The Engineer's Determination</i>	176
7.4.1.2.	<i>Negotiations</i>	177
7.4.1.3.	<i>International Commercial Arbitration</i>	180
7.4.1.3.1.	<i>Selection and use of ICA by parties</i>	180
7.4.1.3.2.	<i>Cost and ICA</i>	181
7.4.1.3.3.	<i>Delays</i>	182
7.4.1.3.4.	<i>Perception of Bias versus Playing Victims</i>	183
7.4.1.3.5.	<i>Other Perceptions about ICA</i>	184
7.4.2.	<i>DRMs Rarely used</i>	184
7.4.2.1.	<i>Dispute Adjudication Boards</i>	185
7.4.2.2.	<i>Expert Determination/Independent Experts</i>	186
7.4.2.3.	<i>Conciliation and Mediation</i>	186
7.4.3.	<i>DRMs not agreed by Parties but in use</i>	188
7.4.4.	<i>Procedure for Dispute Resolution</i>	190
7.5.	Barriers to the Use of Alternative Dispute Resolution Mechanisms.....	192
7.5.1.	<i>Employer-related barriers</i>	192
7.5.2.	<i>Contractor-related factors</i>	195
7.5.3.	<i>Generic Barriers</i>	195
7.6.	Summary.....	197
CHAPTER EIGHT - DISCUSSIONS: IMPLICATIONS OF RESULTS AND		
	REMEDIAL STRATEGIES	201
8.1.	Introduction	201
8.2.	Evaluation of the extant dispute resolution processes	201
8.2.1.	<i>Availability of multiple DRM options</i>	203
8.2.2.	<i>Freedom to move back and forth between Mechanisms</i>	205
8.2.3.	<i>Substantial involvement of Parties in the design of dispute system</i>	205
8.2.4.	<i>Voluntary participation, confidential process and involvement of third party neutrals</i>	205
8.2.5.	<i>Transparency and accountability</i>	206
8.2.6.	<i>Education and training</i>	206

8.2.7.	<i>Transaction Cost</i>	207
8.2.8.	<i>Satisfaction with Outcome and Party relationships</i>	207
8.3.	<i>Factors Accounting for the Extant Dispute Resolution Processes</i>	208
8.3.1.	<i>Foreign Contractors and the dispute resolution processes.....</i>	209
8.3.2.	<i>Influence of funding requirements on Dispute System design.....</i>	209
8.3.3.	<i>The Employer as a Monolith</i>	212
8.3.3.1.	<i>Implications for the Occurrence of Disputes.....</i>	213
8.3.3.2.	<i>Dispute Prevention</i>	215
8.3.3.3.	<i>Implications for Dispute Resolution System Design</i>	216
8.3.3.4.	<i>Implications for Dispute Resolution Practice</i>	219
8.3.3.4.1.	<i>Lack of Inter-organisational Cooperation and Coordination.....</i>	220
8.3.3.4.2.	<i>Impact of Human Resource Constraints on current Dispute resolution processes.....</i>	222
8.3.3.4.3.	<i>Impact of Threat of Blacklist and Political Interference on Dispute Resolution</i>	224
8.3.3.4.4.	<i>Impact of the Legal System on Infrastructure-related Construction Dispute Resolution.....</i>	225
8.4.	<i>Summary of Key Features of the Extant Dispute Resolution Processes</i>	226
8.5.	<i>Remedial Strategies</i>	227
8.5.1.	<i>Paying Attention to Structures and Context</i>	228
8.5.2.	<i>The Contract Formation Stage – Designing the Dispute Resolution Structure</i>	232
8.5.3.	<i>Dispute Avoidance and Resolution.....</i>	233
8.5.4.	<i>Post-Dispute resolution - Evaluation of Outcome.....</i>	235
8.5.5.	<i>The Dispute Resolution Efficiency Cycle</i>	236
8.5.6.	<i>Contribution of Foreign contractors and Funding Organisations.....</i>	238
8.6	<i>Summary.....</i>	238
CHAPTER NINE - VALIDATION		241
9.1.	<i>Introduction</i>	241
9.2.	<i>Validation in Qualitative Research.....</i>	241
9.3.	<i>Procedures for Validation.....</i>	243
9.3.1	<i>Triangulation.....</i>	244
9.3.2	<i>Reflexivity</i>	244

9.3.3	<i>Peer Review</i>	245
9.3.4	<i>Respondent validation</i>	245
9.4.	<i>Validation in this study</i>	246
9.5.	<i>Feedback from Interviewees</i>	247
9.5.1.	<i>Background of Interviewees</i>	247
9.5.2.	<i>Results of Analysis</i>	249
9.6.	<i>Transferability</i>	251
9.7.	<i>Dependability and Confirmability</i>	252
9.8.	<i>Research Impact</i>	253
9.9.	<i>Summary</i>	254
CHAPTER TEN - FINDINGS, CONCLUSIONS AND RECOMMENDATIONS		257
10.1.	<i>Introduction</i>	257
10.2.	<i>Research Overview</i>	257
10.2.1.	<i>Objective One</i>	258
10.2.2.	<i>Objectives two to six</i>	259
10.3.	<i>Findings</i>	260
10.3.1.	<i>The Extant Dispute Resolution Processes</i>	260
10.3.2.	<i>Factors Accounting for the Extant Dispute Resolution Processes</i>	261
10.3.2.1.	<i>The Complex Employer</i>	261
10.3.2.2.	<i>Foreign Contractors</i>	263
10.3.2.3.	<i>The Legal Framework for Procurement and Dispute System Design</i>	263
10.3.2.4.	<i>The Legal Framework for Infrastructure-related Dispute Resolution</i>	265
10.3.2.5.	<i>Factors inhibiting use of Alternative Dispute Resolution Mechanisms</i>	266
10.3.3.	<i>Remedial Strategies</i>	266
10.3.3.1.	<i>Addressing structural and contextual issues</i>	266
10.3.3.2.	<i>Paying attention to Dispute Resolution System Design</i>	267
10.3.3.3.	<i>Dispute Avoidance and Resolution</i>	267
10.3.3.4.	<i>Post dispute resolution –Evaluation of Outcome</i>	268
10.4.	<i>Contribution to Knowledge</i>	269
10.4.1	<i>Contribution to the Field of Dispute Resolution</i>	269
10.4.2	<i>Contribution to Practice</i>	271
10.5.	<i>Implications of the Research Findings</i>	271
10.6.	<i>Limitations of Findings</i>	273

10.6.1	<i>Geographical Limitation</i>	273
10.6.2	<i>Methodological Limitations</i>	274
10.6.3	<i>Subject-Matter Limitation</i>	274
10.7.	Self-Reflection.....	275
10.8.	Recommendations for further Research	277
10.9.	Summary.....	278
	REFERENCES	280
	APPENDICES	293
	Appendix A - Interview Guide	293
	Appendix A1 - Updated Interview Guide after pilot.....	297
	Appendix B - A sample Request Letter to Institutions affiliated with the Employer	300
	Appendix B1 - Request Letters addressed to Interviewees with Institutions affiliated to the Employer	303
	Appendix B2- A sample Request Letter to Foreign Contractors and adjunct organisations	306
	Appendix C –List of Codes	312
	Appendix D – Themes, Categories, Sub-categories and Codes	328
	Appendix E- List of Interviewees and their Code Names	352
	Appendix F - Sample Code Memo	355
	Appendix G - Line-by-line coding an impractical tedium for this work.....	359
	Appendix G 1- A Return to Line-by-line coding inevitable in certain circumstances	361
	Appendix H – Request for Feedback on Findings (Interviewees)	362

LIST OF ABBREVIATIONS

AALCO	Asian-African Legal Consultative Organization
ADR	Alternative Dispute Resolution
ADRM	Alternative Dispute Resolution Mechanism
AESC	Architectural Engineering Services Corporation
A-Gs	Attorney-General's Department
AICD	Africa Infrastructure Country Diagnostics
AsDB	Asian Development Bank
AfDB	African Development Bank
CIDA	Canadian International Development Agency
CPAR	Country Procurement Assessment Report
DAB	Dispute Adjudication Board
DANIDA	Danish International Development Agency
DB	Dispute Board
DFID	United Kingdom Department for International Development
DRBF	Dispute Resolution Board Foundation
DRM	Dispute Resolution Mechanism
DRMs	Dispute Resolution Mechanisms
EBRD	European Bank for Reconstruction and Development
ECG	Electricity Company of Ghana
EIF	European Investment Fund
FDI	Foreign Direct Investment
FIDIC	International Federation of Consulting Engineers
GHACMA	Ghana Association of Certified Mediators and Arbitrators
GhIS	Ghana Institution of Surveyors
GNCC	Ghana National Construction Corporation
GNI	Gross National Income
GOG	Government of Ghana
GRIDco	Ghana Grid Company
GWCL	Ghana Water Company Limited
GWSC	Ghana Water and Sewerage Corporation
IBRD	International Bank for Reconstruction and Development

ICA	International Commercial Arbitration
ICC	International Chamber of Commerce
ICSID	International Centre for Settlement of Investment Disputes
IDB	Inter-American Development Bank
IIC	Inter-American Investment Corporation
JICA	Japan International Cooperation Agency
LCIA	London Court of International Arbitration
MDAs	Ministries, Departments and Agencies
MDBs	Multilateral Development Banks
MDFIs	Multilateral development finance institutions
MIF	Multilateral Investment Funds
MOFEP	Ministry of Finance and Economic Planning
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OHADA	Organization for the Harmonization of Corporate Law in Africa
PPI	Private Participation in Infrastructure
PPIAF	Public-Private Infrastructure Advisory Facility
PWD	Public Works Department
SALC	South African Law Commission
SHC	State Housing Company
SIDA	Swedish International Development Authority
TCC	Technology and Construction Court
UNCITRAL	United Nations Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
USAID	United States Agency for International Development
VfM	Value for Money
VRA	Volta River Authority

LIST OF AUTHORITIES

Cases

1.	<i>Ackerman v Ackerman</i> [2011] EWHC 3428 (Ch)	68
2.	<i>ADC Affiliate Limited and ADC & ADMC Management Limited v. The Rep. of Hungary</i> (ICSID Case Number ARB/03/16)	74
3.	<i>A-G v Faroe Atlantic Company Limited (the Faroe Atlantic Case)</i> [2005-2006] SCGLR 27	passim
4.	<i>A-G v. Balkan Energy (Ghana) Limited & Ors (the Balkan Energy Case)</i> [2012] 2 SCGLR 998	passim
5.	<i>Amec Civil Engineering Ltd v Secretary of State for Transport (the Amec Case)</i> ([2004] EWHC 2339 (TCC)).....	50,51
6.	<i>Beck Peppiatt Ltd v. Norwest Holst Construction Ltd.</i> [2003] EWHC 822	50
7.	<i>Bernhard Schulte GmbH & Co KG v Nile Holdings Ltd</i> [2004] 2 Lloyd's Rep.52.....	68
8.	<i>Bovis Lend Lease Ltd v Trustees of the London Clinic</i> [2009] EWHC 64 (TCC).....	51
9.	<i>Cantillon Ltd v Urvasco Ltd</i> [2008] EWHC 282 (TCC).....	51
10.	<i>City Basements Ltd v Nordic Construction UK Ltd</i> QBD (TCC) 14 April 2014 (Unreported).....	51
11.	<i>City & Country Waste Ltd. v Accra Metropolitan Assembly (the CCWL Case)</i> [2007-2008] 1 SCGLR 409.....	168
12..	<i>Collins (Contractors) Limited v. Baltic Quay Management (1994) Limited</i> [2005] BLR 63.....	51
13.	<i>Construction Pioneers Baugesellschaft Anstalt (CP) v. Government of Ghana</i> (Case No. 12078/DB/EC).....	170
14.	<i>Ellerine Brothers (Pty) Limited and Another v. Klinger</i> [1982] W.L.R. 1375	50
15.	<i>Fastrack Contractors Limited v. Morrison Construction Limited</i> [2000] BLR168	50
16.	<i>Fili Shipping Co Ltd and others v Premium Nafta Products Ltd and others</i> [2007] UKHL40.....	70

17.	<i>Gibson (Banbridge) Limited v Fermanagh District Council</i> [2013] NIQB 16.....	51
18.	<i>Halifax Life Ltd v Equitable Life Assurance Society</i> [2007] 2 All E.R. (Comm).....	68
19.	<i>Halki Shipping Corporation v. Sopex Oils Limited</i> [1998] 2 All ER 23 (CA).....	50
20.	<i>Halki Shipping Corporation v. Sopex Oils Limited</i> [1997] 3 All ER 833 (Q.B).....	50
21.	<i>Hayter v Nelson and Home Insurance Company</i> [1990] 2 Lloyd's Rep. 265	53
22.	<i>Lesotho Highlands Development Authority (Respondents) v. Impregilo SpA and Others</i> [2005] UKHL 43	73
23.	<i>Macro & Others v. Thompson & Others (No.3)</i> [1997] 2 BCLC 36.....	67
24.	<i>Martin Amidu v A-G & 2 Ors. (The Waterville Case)</i> Suit Number J1/15/2012, judgment of 14 June 2013.....	168
25.	<i>Pey Casado v. Chile</i> (ICSID Case Number ARB/98/2).....	74
26.	<i>Plama Consortium v. Bulgaria</i> (ICSID Case Number ARB /03/24)	74
27.	<i>RJT Consulting Engineers Ltd v. DM Engineering (Northern Ireland) Ltd.</i> [2002] 1 WLR 2344.....	69
28.	<i>RWE NPower Plc v Alstom Power Ltd</i> [2010] C.I.L.L. 2835).....	51
29.	<i>Sterling (t/a M&S Contracts) v Westminster Properties Scotland Ltd</i> [2007] B.L.R. 537....	51
30.	<i>Thames Valley Power Ltd v Total Gas & Power Ltd</i> [2005] [2006] 1 Lloyd's Rep. 441 (QBD) (Comm).....	68
31.	<i>Tradax International v. Cerrahogullari TAS</i> [1981] 3 All ER 344.....	51
32.	<i>Veba Oil Supply & Trading Ltd v Petrotrade Inc (The Robin)</i> [2002] 1 All E.R. 703.....	68
33.	<i>Waguih Elie George Siag and Clorinda Vecchi v. The Arab Republic of Egypt</i> (ICSID Case Number ARB/05/15)	74

Statutes

1.	Alternative Dispute Resolution Act, 2010 (Act 798).....	76,170
----	---	--------

2.	Architectural Engineering Services Corporation Act, 1973 (NRCD 193)	42
3.	Bui Power Authority Act, 2007 (Act 740)	139
4.	Civil Service Act, 1993 (PNDCL 327).....	138
5.	Companies Act, 1963 (Act 179)	156,157
6.	Courts Act, 1993 (Act 459)	170
7.	Ghana Highway Authority Act, 1997(Act 540)	139
8.	Ghana Investment Promotion Centre Act, 2013 (Act 865)....	227
9.	Ghana Water and Sewerage Corporation Act, 1965 (Act 310)	42
10.	Housing Grant, Construction and Regeneration Act 1996.....	49,69
11.	Incorporated Private Partnership Act, 1962 (Act 152).....	157
12.	Local Democracy, Economic Development and Construction Act,2009.....	69
13.	New South Wales Building and Construction Industry Security of	
14.	Payment Act, 1999	69
15.	Public Procurement Act, 2003 (Act 663)	passim
12.	State Proceedings Act, 1998(Act 555)	159
13.	State Property and Contracts Act, 1960 (C.A.6)	138
14.	Statutory Corporations (Conversion to Companies) Act, 1993 (Act 461)	42
15.	Statutory Corporations Act, 1964 (Act 232)	42
16.	Volta River Development Act, 1961 (Act 46).....	139

Rules

High Court (Civil Procedure) Rules,2004 (C.I. 47)	170
---	-----

International Instruments

1.	Convention on the Recognition and Enforcement of Foreign Arbitral Awards, 1958 (the New York Convention).....	71
2.	United Nations Commission on International Trade Law Model Law on International Commercial Arbitration, 1985 (as amended in 2006)	71

LIST OF FIGURES

1.1	Overview of the Research Process.....	11
2.1	Total private investment commitments to infrastructure projects in developing countries, by region, 1990–2008.....	30
5.1	The Research Process Disc.....	80
5.2	Case Description.....	95
5.3	Number of Interviews per week.....	102
6.1	Interviews by Participants.....	111
6.2	Professional Background of Participants.....	111
6.3	Coding Hierarchy.....	115
6.4	Link between ‘Institutional Structures’ and child nodes.....	119
6.5	The theme ‘Features and Context of Parties to the dispute resolution processes’ associated categories and some linked codes.....	120
6.6	The theme ‘Features and Context of Parties to the dispute resolution processes’ associated categories and some linked codes.....	124
6.7	The theme ‘Remedial Strategies’ and its categories	125
6.8	The five themes generated through the process of Clustering.....	125
6.9	Contract Review Process-Embedded in the procurement process.....	130
7.1	The Organogram of GHA.....	141
7.2	Visual representation of interactions between sub-units of the Employer prior to contract execution.....	145
7.3	Factors influencing the selection of Dispute Resolution mechanisms	166
7.4	Dispute Resolution Mechanism in use.....	189
7.5	Dispute Resolution Procedure.....	191
7.6	Dispute Resolution Route.....	192
7.7	Employer-related barriers.....	195
8.1	The Dispute Resolution Efficiency Cycle (DREC).....	238
9.1	Participants in the validation by Participants.....	248
9.2	Professional Background of Participants.....	248

LIST OF TABLES

2.1	Distribution of Findings on impact of infrastructure on productivity and growth.....	33
4.1	List of studies on construction disputes.....	53
4.2	Reasons affecting the selection of dispute resolution mechanisms.....	58
6.1	Participating Ministries, Departments and Agencies with number of interviewees in brackets.....	109,110
6.2	Codes on question regarding claim events.....	117
6.3	The Category ‘claim events’ and its child nodes.....	118
6.4	List of Categories.....	120
6.5	Research Objectives and the corresponding themes and categories addressing them.....	126
7.1	Codes on Factors considered during contract review by the A-Gs.....	143
7.2	Ghana-Budgetary Allocation for the Energy Sector.....	153
7.3	Ghana –Budgetary Allocations for the Road Sector.....	154
7.4	Ghana –Budgetary Allocations for the Water Resource, Works and Housing Sectors.....	154
7.5	Claim Events and Dispute Causes.....	172
8.1	Recommendations on Front-end Preparations for Dispute Resolution.....	229
8.2	Summary of the Four Sets of Remedial Strategies.....	235
9.1	Lincoln and Guba’s (1985) criteria for qualitative validation compared with Quantitative Approaches.....	242
9.2	Practical Steps towards ensuring Quality of the Research	253

ACKNOWLEDGMENT

My foremost thanks go to the Most High God who gave me the desire, wisdom and strength to undertake this study. With you, all things are possible!

My sincerest gratitude goes to my Director of Studies and mentor, Professor Issaka Ndekugri whose inspiration and keen interest in the field of construction law and dispute resolution gave birth to this study in the first place. Prof, thank you for the unwavering support, guidance and direction you have provided throughout this process. Your deep insights, amazing commitment and firm belief in high academic standards have left indelible marks on my thought processes. I am also grateful to Dr Nii Ankrah and Dr Felix Hammond, members of the supervisory team, for their immense contribution. Nii, I owe my improved appreciation of the value of packaging to you!

I thank the University of Wolverhampton for providing the resources which made this study possible. I also thank Professor Cousins for her encouragement throughout the study. To the Dean of the Faculty of Law, University of Ghana thanks for your support. I am particularly indebted to Mr. K.K.K. Ampofo, the Vice-Dean of the Faculty for his encouragement, constant support and advice throughout this study. To you, Madam Justina Tete-Donkor, your support is deeply appreciated.

To all the interviewees, too numerous to mention individually, who made time to share their perspectives on the subject of investigation, I deeply appreciate your contribution to this work. My thanks also go to all the esteemed individuals at the Attorney-General's Department, the Ministry of Finance and Economic Planning, the Ministries of Roads and Highways, Energy and Water, Works and Housing for their unparalleled assistance during data collection. Similarly, my heartfelt appreciation goes to all the personnel at Ghana Highways Authority, Ghana Water Company Limited, the Volta River Authority, Electricity

Company of Ghana and the Public Procurement Authority who made time to assist in the data collection process.

To my friends, Dorothy Dede Wetseh, Esther Lamptey, Victoria and the crew at High Court two, Accra, thanks for your amazing contribution. To Christina Corquaye and Aasiya Nettey who assisted me with the transcription and Nana Ntenah, I appreciate your sacrifices for me.

To my Mother, Beatrice and siblings, Felicia, Rose, Mercy, William and Emmanuel, this achievement is only possible because you have supported and prayed with me throughout my life. Your constant inquiries about progress of work and encouragement did it! To the body of Christ both at home and at Wolverhampton, thank you for your spiritual support. To the Baffour-Awuahs, Solomon, Dingayo, Stan, Emmanuel, Nami, Tulika, Dominic and all other colleagues, we have travelled together on this journey. Your support is much appreciated!

Finally, to my loving and supportive wife, Genevieve Juliet Mante and my children, Charis and Joel, thank you for your understanding, love and support. Gene, I will always remember your profound sacrifice for me and the children during this study.

DEDICATION

This thesis is dedicated to my Heavenly Father. In Him I live, and move and have my being!

And to my earthly Parents, Mathew and Beatrice

CHAPTER ONE

CHAPTER ONE - GENERAL INTRODUCTION

1.1. Introduction

This study was about how construction disputes arising out of major infrastructure projects in developing countries were resolved. A brief background to the study is provided leading to the identification of gaps in the relevant dispute resolution literature. The chapter then provides an outline of the research aim and objectives, the methodology employed and justification for the study. A summary of the findings, the scope and limitations of the research and the structure of the thesis are also presented.

1.2. Background of Study

Like oxygen to the body is infrastructure development to economic development. It is not the only thing needed for sustainability, growth and development, but it is, without doubt, indispensable. This is more so for developing countries (Giang and Sui Pheng, 2011; Moavenzadeh, 1978). The International Bank for Reconstruction and Development and other Multilateral Development Banks (MDBs) have identified infrastructure development (roads, water treatment, plants, power generation/transmission plants and irrigation projects) as essential part of any effective strategy for alleviating poverty in the developing world (World Bank, 1994; Briceno-Garmendia *et al.*, 2004).

As a consequence of their importance and the huge investment required, infrastructure projects have historically been the preserve of States (World Bank, 1994; UNCTAD, 2008; Briceno-Garmendia *et al.*, 2004). As of 1994, developing countries were investing about two hundred billion United States dollars (\$200 billion), amounting to about four per cent (4%) of their national output and a fifth of their total investment into infrastructure development (Kessides, 1993; World Bank, 1994). UNCTAD (2008) maintains that States will need to spend between seven per cent (7%) and nine per cent (9%) of their gross domestic product (GDP) on infrastructure if the huge infrastructure gap is to be bridged. The efforts of States in

the provision of infrastructure have been complemented by the private sector (World Bank, 1994; UNCTAD, 2008). The last two decades have seen increased public-private participation in infrastructure development. Between 1990 and 2001, about 2500 infrastructure projects in developing countries attracted investment commitments of more than \$755 billion from the private sector (Harris, 2003; Kirkpatrick *et al.*, 2006). According to the World Bank sponsored Private Participation in Infrastructure Advisory Facility (PPIAF), these investment commitments increased to about US\$ 843.3 billion between 2001 and 2008 (World Bank and PPIAF, 2010). Both State and private sector participation in infrastructure has been bolstered by increasing number of studies indicating a strong relationship between infrastructure development and economic development (see section 2.6). The literature on the current state of infrastructure development, the role of the MDBs, and the impact of infrastructure on economic development is reviewed in chapter two.

At the heart of the expansion of infrastructure in developing countries is the procurement process. As a result of the huge capital outlay required, many infrastructure projects are awarded to foreign construction companies with capacity to execute these projects (Chan and Suen, 2005). In Africa, for instance, many American, European and Asian construction companies have been involved in infrastructure project construction for decades. A table compiled from Engineering News Record by Chen *et al.* (2007) spanning the period 2001-2005 reveals that American contractors had 15.42% market share of construction projects on the African continent in 2005. Whilst British firms had 5.04% of the share of the market, European contracting firms collectively had 49.33% of the construction market share. In recent years, many Chinese construction companies have joined the competition for construction projects on the African continent and controlled 21.36% of the market as of 2005 (Chen *et al.*, 2007). The story in Ghana was not different. The main parties involved in the procurement of major infrastructure projects were the State and its agencies, and foreign

contractors. The literature on procurement of infrastructure projects in Ghana is reviewed under chapter three.

By virtue of the very nature of infrastructure projects (see section 2.2) and the peculiarities of the construction industry (section 4.2.3), disputes do occur during and after the process (Hibberd and Newman, 1999; Gaitskell, 2006; Hinchey, 2012). Many infrastructure-related construction disputes which occur in the developing world, including Ghana, were international in nature as they involved foreign contractors and were resolved at great cost to the parties. Dispute resolution on international projects is by nature very expensive. The literature on dispute resolution in developing countries points to international commercial arbitration (ICA) as the preferred dispute resolution mechanism (Sanders, 1973; Ehrenhaft, 1977; McLaughlin, 1979; Herrmann, 1983; Hoellering, 1986; Perloff, 1992; Paulsson, 1996; Asouzu, 2001; Tackaberry and Marriott, 2003; Blackaby *et al.*, 2009).

Developing countries have had to embrace the option of international arbitration for reasons associated with investment (Sempasa, 1992; Asouzu, 2001). In the specific case of major infrastructure-related construction dispute resolution, ICA has been adopted for reasons including obtaining funding for projects. Procurement rules of foreign sponsors invariably demanded the incorporation of ICA into transactions they sponsored. Virtually all standard form contracts governing major construction transactions in developing countries, notably those published by the International Federation of Consulting Engineers (FIDIC), contain provisions on ICA. It is stated that the dominance of the use of ICA has created a *de facto* universality of it as the normal method of dispute settlement and parties often choose it without much thought as to its appropriateness (Capper and Bunch, 1998). Other reasons why arbitration is preferred as the dispute resolution mechanism of choice have been examined under section 4.3 and 4.3.8.

However, the literature also revealed that developing countries have issues with ICA. These included challenge to their sovereignty, legitimacy of the system of international arbitration and fear of frivolous and vexatious claims against States by disenchanted entities (Asouzu, 2001). Additionally, there were issues of cost, delays and consequent disruption of works and perceived bias (Asouzu, 2001; UNCTAD, 2010). For instance, regarding cost, the perception was that disputes arising out of major infrastructure projects were often resolved at great cost to developing countries. The United Nations Conference on Trade and Development (UNCTAD) report on investor-State dispute prevention confirmed cost of arbitration was increasing (UNCTAD, 2010). For many developing countries, this was a cause for concern. Often, out of their meagre resources, these countries bore the cost of resorting to ICA. This entailed payment of registration fees, administrative expenses, counsel fees and arbitrator's fees and expenses. Other financial liabilities included expenses relating to witnesses, court, travel, accommodation and feeding for local representatives and lawyers pursuing or defending claims on arbitration (Asouzu, 2001). Another concern was delay occasioned by resort to ICA (UNCTAD, 2010). Major Construction projects are expensive long term undertakings. Unresolved disputes can threaten timely completion of projects and add to cost (Miller and Lessard, 2000).

Apart from the multiplicity of sources of disquiet raised about ICA, three other conclusions emerged from the literature. Firstly, construction disputes were treated like any other dispute involving the State and a foreign entity such as trade and investment disputes (Asante, 1998; Asouzu, 2001). Construction contracts and resultant disputes have their technical peculiarities. Capper and Bunch (1998) name the multiplicity of parties, site specificity, lack of clear and fixed specification by an employer and the sheer variety and volume of evidentiary material as some of the distinctive features of the construction contract. Another of the peculiar features is the complicated payment system which often fosters disputes. Again, construction

disputes (invariably relating to cost, time and or defects) are often technical and require the services of technical specialists (Capper and Bunch, 1998). It is therefore not surprising that in many developed countries such as the United Kingdom, there are specific courts devoted to the handling of construction disputes.

Secondly, the existing literature on the subject of dispute resolution in developing countries did not provide adequate information on how construction disputes arising out of major construction projects involving the State and foreign contractors were resolved. Both the World Bank Procurement Guidelines and the International Federation of Consulting Engineers (FIDIC) Conditions of Contract acknowledge the need for other resolution mechanisms apart from international arbitration for construction disputes. However, there was dearth of literature dealing specifically with infrastructure-related construction dispute resolution mechanisms in use in developing countries, particularly those in Africa. Very little information existed on dispute avoidance, management and resolution generally. The issue of lack of empirical information was acknowledged by Fenn *et al.* (1998) in their report on the techniques and procedure for the management of construction disputes. They indicated that discourse on construction disputes, even in the developed world, has mainly been theoretical. The lack of empirical information, they acknowledged, was an international problem. However, the national practices collected in the said report also contained information mainly from developed countries.

Thirdly, there was a knowledge gap in respect of what transpired immediately a dispute arose and when formal ICA processes commenced. The FIDIC Conditions of Contract often advocated the use of the Engineer's determination (see the Red book, 1987), Dispute Boards, amicable settlement and ICA. No empirical evidence was found on the workings of the FIDIC recommended resolution mechanisms and the challenges associated with them. What parties did in the course of the period for amicable settlement was generally unknown. Further, the

materials reviewed did not consider the viability and the role that alternative dispute resolution mechanisms (ADRM) other than arbitration could play in resolving such disputes and the factors impeding their use. Again the literature did not examine the issues of efficiency and effectiveness of the mechanisms in use and how the front-end processes affected the resolution processes. The literature relating to construction disputes arising out of major projects and trends on the use of various resolution mechanisms are discussed further under chapter four.

On the basis of the gaps identified in the existing literature and the problems identified, two key questions arose. The first question was how did parties to major infrastructure projects in developing countries resolve construction disputes which arose out of such projects? Flowing from this key question, other issues including the following emerged: (i) the features of the organisational structure of the main parties involved in major infrastructure procurement and the context within which they operated; (ii) the legal framework for the procurement of infrastructure projects and dispute resolution; and (iii) mechanisms and procedures by which parties resolve construction disputes which arose out of major projects. The second key question was what strategies could assist parties in their bid to resolve construction disputes effectively and efficiently. An offshoot of this question was what the barriers or peculiar obstacles preventing efficient and effective resolution of construction disputes were and how they could be remedied?

1.3. Aim and Objectives

On the basis of the questions which emerged from the literature review, this study aimed at a critical examination of developing countries' experiences of infrastructure-related construction dispute resolution with the view to develop strategies for efficient and effective resolution. To achieve the above aim, six objectives were set and pursued namely:

1. a critical review of the literature on the state and trends of infrastructure development in developing countries, the processes relating to major project acquisitions and how construction disputes arising out of such transactions were resolved;
2. identification and examination of features and context of the key parties involved in construction and civil engineering contracts relating to major infrastructure projects;
3. an investigation into aspects of the legal framework for infrastructure procurement relating to dispute resolution such as the contract formation process;
4. examination of the legal framework for resolving disputes arising out of major projects including the processes involved from the emergence of a dispute to its final determination;
5. identification of challenges to the existing modes of resolution including barriers to the use of methods other than litigation and international commercial arbitration;
6. development of an explanatory framework and remedial strategies for the extant construction dispute resolution processes.

1.4. Research Methodology

The study adopted a qualitative research approach informed by the interpretivist philosophical paradigm. The choice of philosophical paradigm was based on reasons outlined in section 5.4. The enquiry aimed at securing an in-depth understanding of the process of dispute resolution through the views of participants in the major infrastructure sector. Disputes and their resolution are integral parts of the life of individuals. Thus, their views and experiences were relevant to understanding the process (Denzin and Lincoln, 2005; Marshall and Rossman, 2006; Creswell, 2007; Creswell, 2009). The study used case study as a strategy of inquiry for reasons such as the nature of the research objectives, the contemporary nature of the object of inquiry and the need for an in-depth investigation into its heterogeneous properties in a holistic manner (see section 5.5 and 5.7).

Ghana was selected as a holistic and typical case (in the context of developing countries) with data collected from the State and its agencies (as the employer) and contractors (see section 5.7.1). The selection of Ghana as a typical case was based on the assumptions that States are the main clients to infrastructure development in most developing countries (see section 2.3), most infrastructure construction projects are executed by foreign contractors (7.2.3) and there is heavy reliance on external funding for such projects (see section 2.5). Other assumptions include the prevalence of disputes and similarities in approaches to dispute resolution in developing countries. Further, Ghana was selected as a typical case on the basis of prospects of in-depth investigations into the phenomenon studied due to the accessibility and hospitability of the case and convenience (see Stake, 1995; Yin, 2009).

In all, fifty-six interviewees participated in the research. Forty-five participants were drawn from five government ministries, eight implementing agencies and one independent institution of State. The participants were mainly employees of the State in senior management positions. They had diverse backgrounds in law, engineering and quantity surveying and were sampled based on their knowledge and experiences with past and on-going major infrastructure projects, especially those which had or were still experiencing disputes. Additionally, eleven participants from private construction and allied organisations were also selected based on previous dispute resolution experiences on major projects involving the State. Details of the background of the participants are reported in chapter six (see section 6.2).

Data were collected through two main sources, interviews and documents. This was in line with qualitative sources of data discussed by Denzin and Lincoln (2005), Creswell (2007), Gubrium and Holstein (2002) and other treatises on qualitative data. Three types of documentary data were collected. These were archival records, internal documents of relevant organisations and institutions, and documents of a legal nature such as legislations and

judicial decisions (see section 5.7.3.3). Additionally, semi-structured interviews were conducted with participants. Themes covered by the interviews included background of interviewees and their organisations, the extent of their involvement in the procurement of major infrastructure projects and matters relating to disputes and how they were resolved. The themes were based on the research objectives. Semi-structured interviews were used because of the opportunities they offered for further exploration of interesting concepts and verification of ideas from previous interviews (see Gubrium and Holstein, 2002; Denscombe, 2007).

Borrowing from qualitative data analysis procedures associated with grounded theory research, this study employed procedures such as coding, constant comparison, memoing and diagramming (hereafter referred to collectively as grounded theory principles) as tools for data analysis. Doctrinal legal analysis was used to examine documents which were of a legal nature. Generally, the approach to data analysis was inductive. Data were broken down to smaller chunks and labelled as codes under the process of open coding. A total of six hundred and twenty-one codes were generated out of which thirty-eight sub-categories and twenty-three categories were developed. Subsequently, the categories and sub-categories were further integrated into five themes which addressed the objectives two to six of the study. The five themes are 'Features and Context of Parties to Dispute Resolution', 'Procurement', 'Dispute Resolution Processes', 'Consequences of the Extant Dispute Resolution Processes' and 'Remedial strategies'. The process of data analysis was accompanied by memo writing and diagramming. Memos were used to explore codes and categories, to record thoughts about methodology and to capture the emerging story from the data analysis. Diagrams were also used to illustrate emerging linkages between ideas explored through the memos. Details of the data analysis procedures are reported in chapter six. The study adopted Lincoln and Guba's

(1985) criteria of trustworthiness and authenticity to establish the credibility of the research findings (see chapter 9). Below is an overview of the research process.

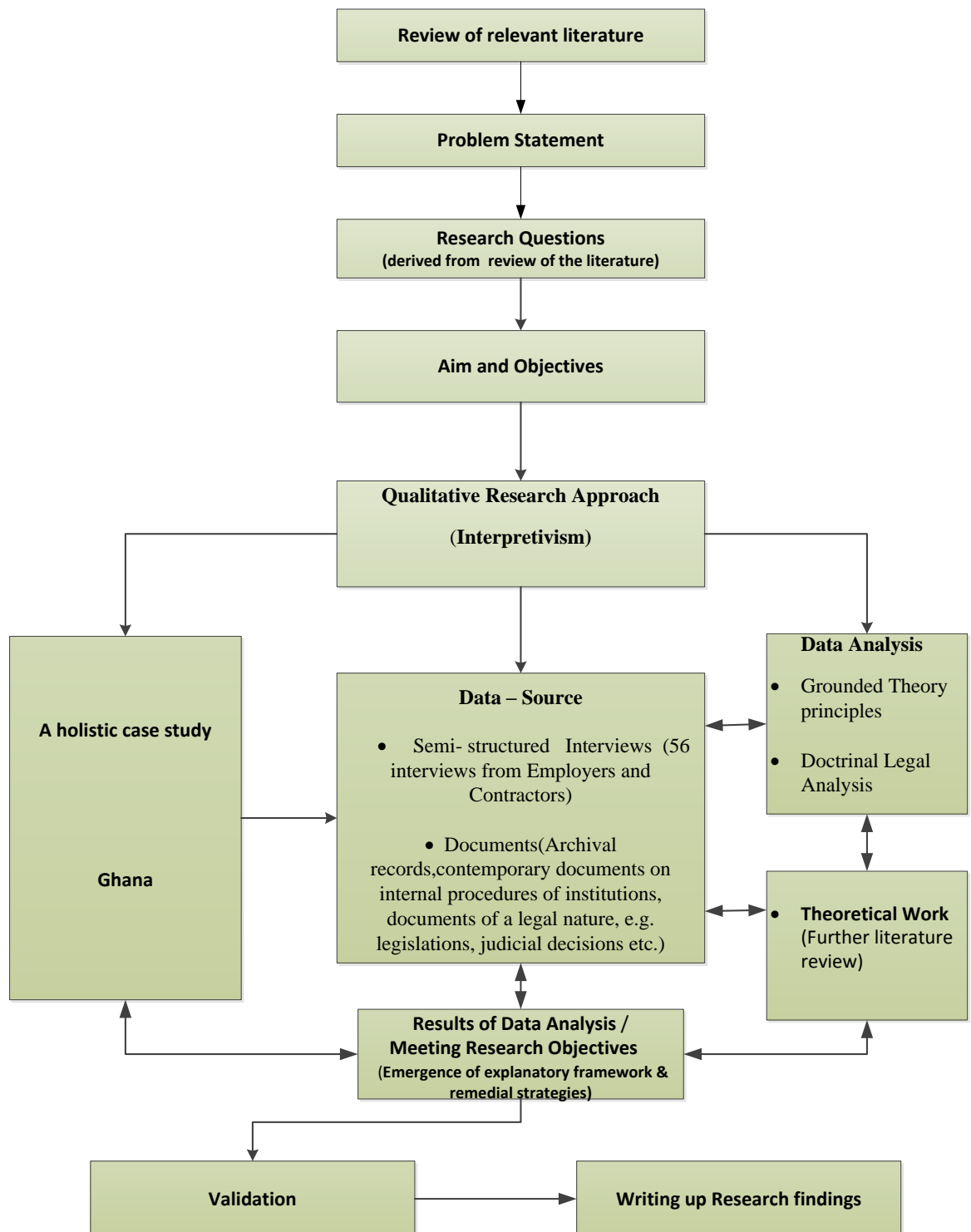


Figure 1:1: Overview of the Research Process

1.5. Research Justification

The growing emphasis on infrastructure development in developing countries has translated into the procurement of major projects. With increased construction activities, disputes have become inevitable (see section 4.2.3). Effective dispute resolution is crucial to project success. Unfortunately, the literature indicated that such disputes were often resolved largely in international fora leading to cost and delays (Asouzu, 2001). There have been sustained concerns about the effect of infrastructure-related dispute resolution on State resources in Ghana in recent times (see Daily Graphic, 2013). This has culminated in the conduct of parliamentary inquiries into how some disputes between the State and some foreign entities were resolved (Parliament of Ghana, 2012). As a further response, the Government appointed a Commissioner to investigate the extent of the liability of the State (Daily Graphic, 2012).

However, as important as this subject is, little was known about pre-ICA dispute resolution approaches. There were no known studies exploring dispute avoidance, management and alternative resolution strategies in the specific case of Ghana. There was no known empirical study on how parties to major infrastructure projects resolved construction disputes arising out of such projects. The absence of research into construction dispute resolution in Ghana, as was the case with many developing countries, meant parties involved in major construction disputes were deprived of standards by which their current dispute resolution practices could be appraised. The lack of industry-specific policies, structures and expertise for construction dispute resolution could also be attributed partly to the absence of research clarifying issues in the field and suggesting possible solutions. This study has contributed to efforts to fill this knowledge gap in the context of the developing world. It has provided information that will help the different constituencies involved in major infrastructure projects better appreciate the dynamics of the resolution processes within the industry. It is expected that such an

understanding will influence dispute resolution choices of parties to projects and improve outcomes.

In terms of contribution to policy, there were no clear industry-specific policy and guidelines on how construction disputes involving the State and foreign contractors should be dealt with in Ghana. Consequently, negotiation of contracts and construction dispute resolution were dealt with on ad hoc basis. This research has made contribution to policy by drawing the attention of governments in the developing world to the utility of such a process. A policy on dispute resolution will enhance transparency in the dispute resolution processes. For foreign contractors, international arbitration may not necessarily be the most cost-effective and useful means of resolving disputes. Considering and encouraging the use of intermediary dispute resolution mechanisms may eventually lead to reduction in cost and delays and the preservation of business relationships.

1.6. Summary of Findings, Conclusions and Recommendations

The findings of the study have been divided into three main components namely, the extant dispute resolution processes, factors accounting for it and remedial strategies. The first component describes the findings on current construction dispute resolution practices as they relate to major infrastructure projects in Ghana. The second part identifies factors that account for the extant dispute resolution processes. The third component examines recommendations for improvement. A summary of the findings are presented below.

1.6.1. Extant Dispute Resolution Processes

The phrase ‘extant dispute resolution processes’, as used in this work, refers to the existing infrastructure-related construction dispute resolution practices particularly those relating to parties’ choices of dispute resolution mechanisms or methods and how they are utilised. The study found that Engineer’s determination; negotiation and international arbitration were the regularly utilised dispute resolution mechanisms (DRMs) (see section

7.4.1). This finding partly confirms the position of the existing literature that ICA remains the preferred mechanisms for dispute resolution (Asouzu, 2001). Other mechanisms such as Dispute Adjudication Boards (DAB), Expert determination, Mediation and Conciliation were rarely used (see section 7.4.2). Further, there was evidence of the use of informal mechanisms such as intervention by government officials in dispute resolution (see section 7.4.3). The study pointed to high dispute resolution transaction cost (in terms of money and time expended), low satisfaction with international arbitration outcomes and negative effect of international arbitration on relationships between parties (see sections 7.4.1.3.2 to 7.4.1.3.5) as features of the extant dispute resolution processes.

Informal dispute resolution mechanisms such as resort to political officeholders lacked transparency and accountability. Parties relied extensively on negotiations due to lack of regular education and training of professionals in other dispute mechanisms. There was no national policy on infrastructure-related construction dispute resolution. Construction and engineering disputes were treated like any other, despite their peculiar features. Further, there was no written policy or guidelines on the use of ADR by the Employer on disputes arising out of major projects. To address the challenges with the extant dispute resolution processes there was a need to identify the factors which had shaped it. These factors are summarised below.

1.6.2. Factors Accounting for the Extant Dispute Resolution Processes

The data analysis disclosed that the existing dispute resolution processes was the product of the nature of the parties involved in major infrastructure procurement, the context in which they operated and their activities, which were essentially, their responses to the context. The two main parties, namely, the Employer (the State and its agencies) and foreign contractors possessed distinct features which had enormous bearing on the workings of the dispute resolution processes. The State as an Employer is considered as a single unit. This

consideration failed to take into account the multiple structures which came together to constitute the entity called the State. The study found that the Employer was made up of multiple organisations (sub-units). Each of these sub-units played a unique role in the performance of the contractual duties of the Employer. As a result, every step taken by the Employer towards the fulfilment of its obligations required cooperation among the sub-units and coordination of their activities. These translated into lengthy consultations and approvals. Consequently, the Employer's performances under construction contracts naturally suffered delays.

The problems associated with the workings of the Employer were exacerbated by other contextual issues such as internal turf wars, human resource constraints, political interference and the fear of being blacklisted. These weaknesses affected the Employer's ability to prepare adequately for projects, avoid disputes, negotiate an efficient dispute resolution system and resolve disputes effectively.

By virtue of their nature as foreign entities, foreign contractors preferred dispute resolution mechanisms which were neutral, fair and could deliver binding outcomes capable of enforcement not only in the Employer's jurisdiction but also worldwide. International arbitration satisfied these criteria and thus remained the preferred dispute resolution mechanism for foreign contractors. Detailed examination of the structure, functions and other features of the Employer and foreign contractors which impacted the dispute resolution processes can be found in chapter seven.

The framework for procurement, particularly the process by which parties designed the dispute resolution system for future use had enormous influence on how they eventually resolved disputes which arose from projects. It was found that parties to major construction transactions had limited influence over the selection of dispute resolution mechanisms and procedures. Funding agencies nominated Conditions of Contract which contained dispute

clauses. Parties' negotiations on future dispute resolution took place within the parameters of the dispute clauses in nominated Conditions of Contract. Very little was done by the parties, especially the Employer, to adjust the standard dispute clauses to suit their needs or address existing problems with dispute resolution. Procurement strategy was determined mainly by funding requirements. There was little awareness of the potential positive impact that the procurement process can have on dispute resolution (see section 7.3.1). Detailed analysis of the procurement process as it related to contract formation and the dispute resolution system design in particular is presented in section 7.3.

On the basis of the finding that intermediary dispute resolution mechanisms were rarely used (see section 1.6.1), the study sought to identify factors which inhibited the use of such mechanisms. The factors identified were categorised into three, namely employer-related, contractor-related and generic barriers. The employer-related barriers included lack of institutional cooperation, poor record keeping and fear of failure to meet expectations. Other examples of employer-related barriers were the fear of being blacklisted entertained by contractors, lack of stance on alternatives to ICA, public suspicion and lack of specialisation. An example of contractor-related barriers was fear of victimisation. The generic barriers to the use of intermediary dispute resolution mechanisms identified included lack of adequate knowledge of alternatives to international arbitration, the adversarial culture and negative perceptions of ADR. Detailed examination of the barriers to the use of ADR is presented in chapter seven (see section 7.5).

1.6.3. Remedial Strategies

Based on the features of the extant dispute resolution processes, the factors accounting for them and the consideration of the relevant literature, four sets of remedial strategies were recommended. These are as follows: (i) addressing structural and contextual problems; (ii) paying attention to dispute resolution system design; (iii) focusing on dispute avoidance and

resolution; and (iv) institutionalising post-dispute resolution evaluation of processes and outcome. Regarding structural preparations, it is submitted that parties to major infrastructure contracts, particularly the Employer, need to take specific steps to prepare the context within which procurement takes place and to put in place adequate structures to ensure that they can effectively deal with disputes which subsequently emerge.

Ten structural and contextual preparations are recommended based on the data analysis. These include the formulation of specific policies on dispute avoidance and resolution with overriding objectives for infrastructure-related construction dispute resolution, developing standards and guidelines for the use of less known and utilised dispute resolution mechanisms and streamlining institutional roles in the resolution of disputes. Further information on the other recommendations under this set of remedial strategies is reported under section 8.5.1.

The second set of remedial strategies focused on dispute system design. For the Employer, five specific strategies are recommended for adoption and utilisation during contract negotiations, particularly the aspect on dispute clauses. Firstly, negotiations on dispute clauses must focus on establishing a dispute resolution framework or structure capable of achieving the overriding dispute resolution objectives of the Employer. Secondly, lessons from previous dispute resolution experiences must inform new negotiations on dispute clauses. Thirdly, negotiations on dispute clauses need to incorporate new terms on specific possible intermediary resolution mechanisms which parties will utilise during the period of amicable settlement. The fourth recommendation is that personnel involved in contract negotiations at the Ministries, Departments and Agencies (MDAs) of the Employer must receive regular training. Finally, to help the Attorney-General's Department (A-Gs) to efficiently perform its legal obligation of contract review, the Employer need to consider setting up a unit within the A-Gs to specifically perform this role. Additional information on this set of recommendations is presented under section 8.5.2.

The third set of remedial strategies focuses on enhancing dispute avoidance and reduction and effective resolution. Strategies which can be employed to realise the goal of institutionalising and enhancing dispute avoidance and reduction include the following: (i) developing a policy on dispute prevention and reduction; (ii) using standing neutrals such as Dispute Review Boards; (iii) employing collaborative procurement methods which encourage parties to focus on reducing disputes; (iv) effective project management; and (v) training staffs responsible for projects to be aware of and comply with the Employer's policy on avoidance.

In relation to the actual dispute resolution processes, three strategies are recommended. Firstly, it is suggested that the MDAs' capacity to effectively perform their existing roles of dispute resolution should be strengthened through regular training in the use of ADR mechanisms. Effective dispute handling at the MDAs will limit the number of disputes which eventually reach the A-Gs. At the A-Gs, it is recommended that a unit be established to be solely responsible for infrastructure-related dispute resolution referred to the A-Gs by the MDAs. Secondly, the Employer must focus on the use of intermediary dispute mechanisms in appropriate cases. The decision to use a particular dispute resolution mechanism must be made in accordance with the proposed guidelines on the use of ADR. Finally, active cost-cutting measures must be implemented during international arbitration proceedings through the enforcement of agreements on cost sharing and the use of rules of evidence which aim at cost reduction. Further details of this set of remedial strategies are presented under section 8.5.3.

The final set of remedial strategies aim at institutionalizing post-dispute resolution evaluation of processes and outcome. It is expected that lessons learnt from such process will be fed back into the system to improve subsequent infrastructure-related dispute resolution processes. The four sets of remedial strategies have been integrated into a theoretical model called the Dispute Resolution Efficiency Cycle which demonstrates how parties involved in

infrastructure procurement can, through regular improvements, resolve disputes more effectively (see Figure 8.1). Further information on the proposed model is presented under section 8.5.5.

1.6.4. Implications of findings for other Developing Countries

The findings have implications for other developing countries. As demonstrated by the literature, ICA remains the dominant resolution mechanism for infrastructure-related construction disputes in many developing countries especially those in Africa (Asouzu, 2001; Cotran and Amissah, 1996). This study shows that creating an effective dispute resolution system in developing countries will require more than the dominant use of ICA. A holistic approach to dispute resolution as captured by the Dispute Resolution Efficiency Cycle is what is recommended (see section 8.5.5). However, it is noted that the issues to be addressed under each component of the Cycle may differ from country to country.

1.7. Scope and Limitation

This section describes the scope of the study in terms of the kind of disputes, parties, projects and geographical location it relates to. The study primarily focused on how construction-related disputes arising out of major infrastructure projects were resolved. Dispute resolution, the core concept under examination relates to all aspects of life. Indeed, the process of major infrastructure procurement in developing countries is often fraught with various kinds of disputes relating to issues such as labour, land, ownership, compensation claims and resettlement. The study concentrated on construction disputes. The work did not extend to the other types of disputes mentioned. However, the core principles and findings of the study are likely to be useful to the resolution of other disputes as well.

Further, the investigation focused on main parties to major infrastructure procurement in developing countries, the State/Government and its agencies as the Employer and foreign contractors. It is acknowledged that, disputes may and do erupt between parties other than the

main parties to an infrastructure-related construction contract with different ramifications. There are instances where such disputes may erupt between a foreign design firm and a construction firm, a foreign major contractor and a domestic sub-contractor, two foreign design firms or two foreign construction firms. There is also a possibility of multi-party disputes involving three or more parties (see Draetta, 2011). The focus of this research, however, was on construction disputes between the State as an Employer and foreign contractors.

Additionally, the study focused on specific types of projects described as major infrastructure projects (see chapter two). In the context of this study, major infrastructure projects are public projects involving the Employer and foreign contractors. Though a contractor may be incorporated in a particular developing country, it does not necessarily mean that transactions it conducts with the government of that particular country or its agencies are to be considered as domestic in all situations. Using Ghana as an example, so long as the place of central management and control of the contractor is situated outside the jurisdiction of Ghana and the transaction has a significant foreign element, such a project will be considered as involving foreign participation and thus, come under the scope of this work (see *A-G v. Balkan Energy (Ghana) Limited & Ors (the Balkan Energy Case) [2012] 2 SCGLR 998*). Examples of major infrastructure projects which remained the focus of this study included the construction of roads, water supply systems, dams and thermal plants.

In terms of the geographical location of interest, the study relates to developing countries generally with Ghana as a case study (see section 5.7.1.1). Notwithstanding the choice of Ghana, the findings of the research may be useful to developing countries many of which share infrastructure procurement characteristics similar to those pertaining to the Ghana (see Flyvbjerg, 2006). Admittedly, country-specific differences may warrant further work to be done in order to make the findings specifically applicable to the situations of individual

developing countries (see section 9.6). Methodologically, it is appreciated that the primary goal of a case study is to focus on the case in issue. However, the use of grounded theory principles enabled the issues at stake to be examined conceptually. Consequently, the relevance of the resulting concepts goes beyond Ghana to other developing countries.

1.8. Contribution to Knowledge

Contribution that this study has made to knowledge can be viewed from two perspectives namely substantive contribution to the field of dispute resolution (see section 10.4.1) and practice (see section 10.4.2). On the first perspective, the study has contributed to the body of knowledge on the field of dispute resolution as it pertains to the resolution of infrastructure-related construction disputes arising from projects in developing countries. The study has provided descriptive data on the existing dispute resolution processes. It has also furnished insights into what transpired between parties to disputes prior to resort to international arbitration. Again, the study has highlighted the need for attention to be focused not only on the back-end dispute resolution processes but also the front-end where the dispute system is designed. Other contributions to knowledge are examined under section 10.4.1. In relation to practice, the study has identified the main features and difficulties with the extant resolution practice. It has also recommended remedial strategies to deal with the problems identified (see section 10.4.2).

Regarding dissemination of the research outcome, an aspect of this study on the concept of arbitrability in the context of Ghana's arbitration law has been published in the *International Arbitration Law Review*, a refereed journal of international repute (Mante and Ndekugri, 2012). Two other draft articles on the interplay between contract and public law and the implications of the nature of the Employer as a complex entity for problem-solving on projects are currently under review towards publication. Additionally, two papers presented at the RICS Construction and Property Conference (COBRA) and the Association of

Researchers in Construction Management Conference (ARCOM) respectively have also been published as part of the conference proceedings (Mante *et al.*, 2011; Mante *et al.*, 2012).

1.9. Structure of the Thesis

The thesis is organised into ten chapters. Chapter one provides an overview of the entire research. Chapter two examines the current state and trends in infrastructure development in developing countries. It presents an overview of the literature on nature and characteristics of infrastructure, its importance to economic development and the trends in developing countries, Africa and Ghana. Chapter three reviews the literature on infrastructure procurement methods and infrastructure procurement practice in Ghana. The chapter points out the limitations of the existing literature.

In chapter four, a review of studies on how infrastructure-related construction disputes are resolved is presented. The chapter begins with an examination of the concepts of claim and dispute. An overview of sources and types of construction disputes is then provided. The literature on construction dispute avoidance and resolution mechanisms available in developed countries such as arbitration, mediation, adjudication and dispute boards are also reviewed. The chapter then examines studies on construction dispute resolution in developing countries. It ends with an identification of the knowledge gaps.

In chapter five, the research methodology for the study is set out. The first part of the chapter (sections 5.2-5.6) discusses the literature on research methodology with a focus on choices for the study. This part identifies and provides rationale for the epistemological position of the study. It also examines the methodologies and methods available to both quantitative and qualitative researchers. The second part of the chapter (sections 5.7-5.9) discusses the research design. Issues addressed under this part include case design, data collection and data analysis. This is followed by a brief examination of the research evaluation criteria.

The procedure for data analysis is reported in chapter six. The chapter begins with a presentation of information on the background of the participants for the research. This is followed by a general overview of the data analysis. Detailed information on the coding process, memo writing and the generation of diagrams and models are then reported. Finally information on doctrinal legal analysis is presented. The data analysis culminated in the development of five themes which addressed the objectives of the research.

The outcomes of the data analysis are reported in chapter seven. The chapter is divided into three sections. The first section reports the outcome of the data analysis on the theme ‘Features and Context of Parties to Dispute Resolution’. Findings relating to the nature of the State as an Employer, the workings of its sub-units and the context within which they worked are presented under this section. Similarly, results of the analysis on the nature of foreign contractors and how this affected the dispute resolution processes is also reported under this section.

The second section of chapter seven reports the results of the data analysis as summed up under the theme ‘Procurement’. Issues addressed included the legal framework for procurement and construction dispute resolution, procurement methods for infrastructure and the impact of procurement on dispute resolution. Results of the analysis on contract formation, Conditions of Contract and dispute clauses are also presented under this section. Essentially, the dispute mechanisms usually agreed in the Conditions of Contract were the same as those regularly used. This finding underscored the importance of the procurement process to the dispute resolution processes.

Results of the data analysis on the nature and features of the extant infrastructure-related dispute resolution processes (embodied in the theme ‘the dispute resolution processes’) are reported in chapter seven. Also reported in this chapter are the results on barriers to the use of ADRs, particularly the intermediary mechanisms.

Chapter eight is the discussion chapter. The extant dispute resolution processes are evaluated on the basis of the relevant literature. Following the evaluation, implications of factors identified as accounting for the current state of the dispute resolution processes are examined. The chapter concludes with a discussion of the remedial strategies leading to the formulation of a new model called *Dispute Resolution Efficiency Cycle (DREC)*. Chapter nine reports on how the research was validated. Finally, chapter ten provides a brief overview of the research process, an outline of how the research objectives were met, summary of the research findings and contributions of the study has made to knowledge and practice. The chapter ends with limitations of the findings and recommendations for further research.

CHAPTER TWO

CHAPTER TWO-INFRASTRUCTURE DEVELOPMENT: CURRENT STATE AND TRENDS IN DEVELOPING COUNTRIES

2.1. Introduction

In this chapter, a review of the literature relating to the state and trends of infrastructure development in developing countries is presented as a necessary background to the study. As part of the review process, searches were conducted in key infrastructure databases such as the World Bank's website on infrastructure development, the World Bank/ PPIAF Library and the Stanford University-Global Project Portal. Multi-disciplinary databases such as Google scholar, Science direct and Scopus (currently operated by Elsevier) were also interrogated. Key words and phrases such as 'infrastructure', 'infrastructure development', 'infrastructure funding', 'infrastructure development in developing countries', 'multilateral development banks and infrastructure development' and 'infrastructure development and economic development' were used in the searches. The above keywords were selected on the basis of their potential to lead to literature on current state and trends on infrastructure development in developing countries. Information obtained from materials collected through internet and library searches formed the basis of this chapter.

The chapter highlights the growing emphasis on infrastructure development by developing countries and multilateral development institutions and the reasons for it. According to the literature, the current emphasis on infrastructure is largely attributable to increased research indicating a positive correlation between infrastructure and economic development. This has culminated in increased investments in infrastructure projects in developing countries. The literature on the current state of infrastructure development, the role of the MDBs, and the impact of infrastructure on economic development is discussed. In this study, 'developing countries' include all lower and middle income economies (World Bank, 2011a).

2.2. Nature and Characteristics of Infrastructure Projects

Infrastructure has been defined as comprising the physical facilities, institutions and organizational structures, or the social and economic foundations, for the operation of a society (UNCTAD, 2008). The World Bank (1994) also defines infrastructure, in physical and economic terms, as public utilities (power, telecommunications, piped water supply, sanitation and sewerage, solid waste collection and disposal, and piped gas), public works (roads and major dam and canal works for irrigation and drainage) and transport facilities (urban and inter-urban railways, urban transport, ports and waterways, and airports). However, the World Bank's definition is steeped in the historical view of infrastructure as 'public utilities' and/or 'public works'. This characteristic of infrastructure is not all-encompassing as there are many infrastructure projects today which do not fit the 'public' tag. However, one can agree with the World Bank (1994) on the examples of infrastructure projects cited. The United Nations Conference on Trade and Development's (UNCTAD) report on infrastructure and Trans-national Corporations (UNCTAD, 2008) provide a similar list of examples of infrastructure but provide a caveat that the category is changing with the advent of information communication technology (ICT) (see also Prud'homme, 2004; Kessides, 1993). In Ghana, infrastructure has been defined to include immovable capital such as, roads, power plants, water delivery systems, sewerage treatment plants, telecommunication and transport facilities (MOFEP, 1997).

Physical infrastructure projects share some common characteristics. UNCTAD (2008) identifies five of them. Firstly, they are capital-intensive. They are challenging undertakings involving huge financial outlay. Secondly, they often involve physical networks of strategic importance. Often lumpy, they are long-lasting and space-specific (Prud'homme, 2004). They are also major determinants of the competitiveness of an economy. Good infrastructure can play a major role in the decision of an investor to set up in a particular economy. Fourthly, in

many societies, services associated with infrastructure are thorny social and political issues and thus subject to public interventions. Finally, infrastructure projects are relevant to economic development and global integration.

Odams and Higgins (1996) identify five additional characteristics of major infrastructure projects. Firstly, there is often an external funder who plays an active role in determining the project structure. Secondly, the client is often the State or a State-owned entity. Further, there is a foreign element in the form of an investor or a contractor. Additionally, the contractor often plays a more active role in what is traditionally the role of the client. Finally, the contractor tends to assume much more significant risks. Cheung and Yiu (2007) adds that these projects are often laden with complexities which make them dispute-prone. These types of projects and associated construction disputes were the subject-matter of this study.

2.3. Infrastructure Projects in Developing Countries –Current trends

Provision of infrastructure has historically been the responsibility of States (World Bank, 1994;Briceno-Garmendia *et al.*, 2004 ; UNCTAD, 2008). State involvement in infrastructure development was justified on various grounds; public interest, contribution to growth and development and the fear of creating private monopolies among others (Annez, 2006). Infrastructure projects were the responsibility of governments (Kessides, 2004; Estache and Fay, 2007). This is still the case for many countries and national resources are committed to infrastructure development annually.

For some developing countries however, huge budget deficits have made it impossible to cater adequately for infrastructure projects from internal resources. World Bank and UNCTAD figures revealed that as of 1994, developing countries were investing about US\$200 billion, amounting to about four per cent (4%) of their national output in infrastructure development (Kessides, 1993; World Bank, 1994; UNCTAD,2008). Calderon and Servén (2010) discussing the current infrastructure gap in Latin America, attributed it to

the lag in public spending in the late 1980s and the 1990s by governments in the region. On the average, Latin American countries were spending about two to three per cent (2% - 3%) of their GDP on infrastructure, though about three to six per cent (3% - 6%) spending was required to make the needed difference (Fay and Morrison, 2007). Part of the economic successes achieved by East Asia in the last quarter of a century has been attributed to continued public spending on infrastructure in the 1990s (ADB *et al.*, 2005). Data from the World Bank's Private Participation in Infrastructure (PPI) for 2005 revealed that Cambodia, the Philippines and Indonesia spent between zero and four per cent (0-4%) of their GDP on infrastructure, whilst China, Thailand and Vietnam spent more than seven per cent (7%) (ADB *et al.*, 2005).

Africa's infrastructure needs remain enormous. The Africa Infrastructure Country Diagnostics (AICD), a project aimed at collecting comprehensive data on Africa infrastructure and providing an integrated analysis of the data, indicates that Africa lags well behind other regions of the world in terms of provision of infrastructure (Foster and Briceño-Garmendia, 2010). Power generation and paved roads are some of the infrastructure provisions in respect of which the gap is particularly wide. It was observed that the total power generated by the forty-eight (48) countries in Sub-Saharan Africa with a population of 800 million was equal to the power generation capacity of Spain, with forty-five (45) million people (Foster and Briceño-Garmendia, 2010). It is reported that Africa will need to invest about US\$93 billion (15% of the region's GDP) a year, in infrastructure if it is to make up for the infrastructure deficit (Foster and Briceño-Garmendia, 2010). UNCTAD (2008) maintained that developing countries will need to spend between seven per cent (7%) and nine per cent (9%) of their national output on infrastructure if the huge infrastructure gap is to be bridged. In spite of the increases in private participation in infrastructure procurement in developing

countries over the last two decades (see Figure 2.1 below), States still remain key clients of infrastructure projects.

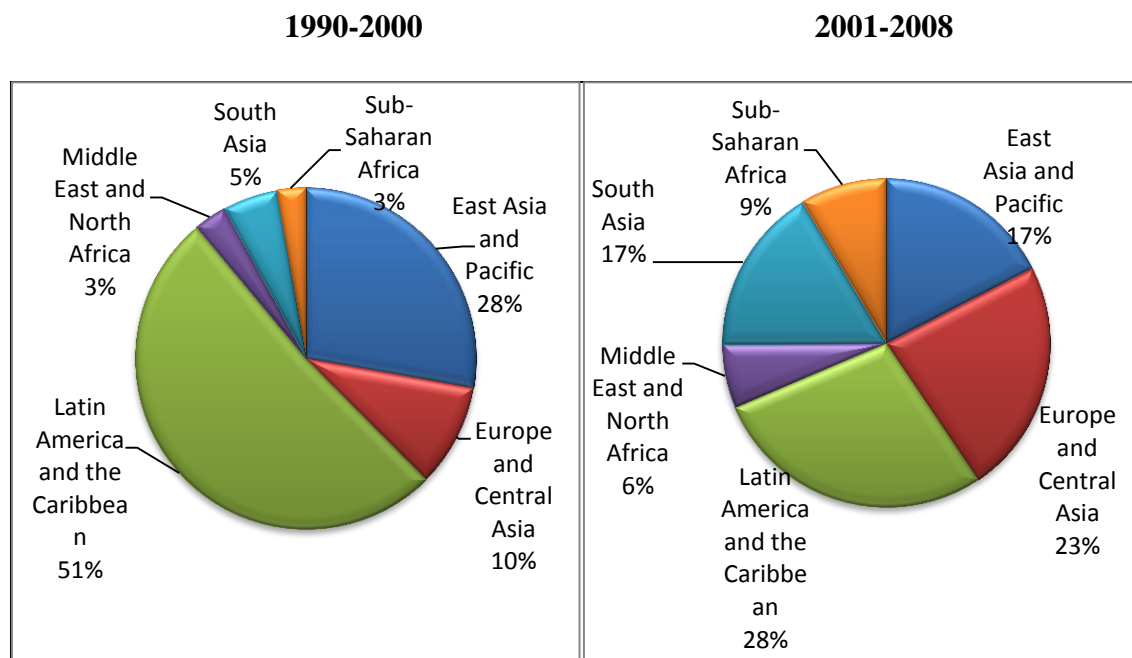


Figure 2.1: Total investment commitments to infrastructure projects with private participation in developing countries, by region, 1990–2008. (Source: World Bank and PPIAF, PPI Project Database)

2.4. Infrastructure Development in Ghana – Current State and Trends

The bulk of infrastructure development activities are in the roads and transport, housing, water, education and energy sectors of the economy (MOFEP, 1997; Government of Ghana, 2008 ; Government of Ghana, 2010a). Infrastructure development in the road sector cover the construction, rehabilitation and maintenance of trunk roads, urban road networks and feeder roads linking remote production hubs to markets in towns and cities across the country. The transport sector infrastructure projects cover expansion and maintenance of rail tracks, airports, water and seaports (MOFEP, 1997). Major infrastructure construction activities in the energy sector cover the generation, transmission and distribution of power.

As part of the AICD research, substantial data on the state of Ghana’s infrastructure development covering principally the period 2001 and 2006 (and in some cases the period up to 2009) were collected and same has been synthesised into a report and a policy research

paper on Ghana's infrastructure (Foster and Pushak, 2011). The infrastructure outlook of Ghana presented in this section is largely based on this report. In sum, the report observed that Ghana's infrastructure is in a relatively better position when compared with other low-income countries in the region. Nevertheless, Ghana's infrastructure contributed a little over one per cent (1%) to the country's GDP growth which averaged 5.6% during the last decade; a further boost in infrastructure development has the potential to raise the contribution of infrastructure to GDP to 2.7% (Foster and Pushak, 2011).

2.5. Funding Infrastructure Development

Many developing countries rely on external resources to fund projects. These resources are mobilized through multilateral and bilateral arrangements. Bilateral institutions such as the United States Agency for International Development (USAID), Canadian International Development Agency (CIDA), Japan International Cooperation Agency (JICA), the Swedish International Development Authority (SIDA), and the United Kingdom Department for International Development (DFID) have been instrumental in supporting states to improve their infrastructure (DFID, 2011). The emerging role of some developing economies particularly China and India as capital exporting States has also been acknowledged by UNCTAD in its 2010 World Investment Report.

Regarding multilateral assistance, contributions of developed States in the form of Official Development Assistance (ODA) has been a major source of capital for infrastructure development in developing countries (Jepma, 1991; Clark, 1992). Much of ODA assistance is disbursed through multilateral development institutions and banks, notably the World Bank and the four regional banks namely, the African Development Bank (AfDB), the Asian Development Bank (AsDB), the Inter-American Development Bank (IDB), and the European Bank for Reconstruction and Development (EBRD) (Nelson, 2010). There are also multilateral development finance institutions (MDFIs) such as the European Investment Fund

(EIF), the Multilateral Investment Funds (MIF), and Inter- American Investment Corporation (IIC) also performing similar functions.

The main role of the MDBs has been to offer financial products in the form of loans, grants and technical assistance to developing countries in line with lending conditions. The lending facilities provided by the MDBs are in the nature of policy-based loans usually tagged to agreements on policy reforms and investment project loans typically granted for large infrastructure projects (Nelson, 2010). In sum, States remain largely responsible for infrastructure procurement. Internal resources are supplemented by external funds namely official development assistance, private participation in infrastructure (PPI) and non-OECD funds from countries such as Brazil, China and India.

Information on Ghana's infrastructure funding can be tracked through the annual national budgets of Ghana and various World Bank studies notably, the AICD reports. Sources of infrastructure funding can be broadly categorized into domestic and foreign sources (Government of Ghana, 2010b, para 17). The foreign sources can further be categorized into ODA, non-OECD and PPI sources. In terms of sectoral coverage, funding for ICT and power projects are mainly from domestic and non-OECD sources, whilst the country rely substantially on ODA for road and water capital investments (Foster and Briceño-Garmendia, 2010).

Ghana's current annual infrastructure spending amounts to \$1.2 billion equivalent of eleven per cent (11%) of its 2006 GDP (Foster and Pushak, 2011). This expenditure is sourced from four main sources; ODA represents thirty-five per cent (35%), public investment constitutes twenty-eight per cent (28%), private investment, twenty-four per cent (24%) and the remaining percentage spending from non-OECD sources. With the rising involvement of China and other non-OECD members in infrastructure provision in Ghana, their percentage contribution is likely to rise (Foster *et al.*, 2009).

2.6. Infrastructure Development and Economic Development

The question of impact of infrastructure on economic development has engaged the attention of many authors (Estache, 2004). Research on Latin America (Andrés *et al.*, 2008; Calderón and Servén, 2010b), Sub-Saharan Africa (Calderón and Servén, 2010a; PEI, February, 2011; Ncube, 2010; Foster and Briceño-Garmendia, 2010) and East Asia (ADB *et al.*, 2005) have all shown positive linkages between infrastructure development and economic growth and productivity. These reports have also indicated regression in growth where there have been cuts in infrastructure development. Briceño-Garmendia *et al.* (2004) reproduced and analysed the findings of a study conducted by de La Fuente and Estache (2004) to illustrate the impact of infrastructure development on growth (Table 2.1 below).

Table 2.1: Distribution of Findings on impact of infrastructure on productivity and growth (Source: de la Fuente and Estache, 2004 in Briceño-Garmendia *et al.* 2004).

Area Studied	Number of Studies	Percentage showing positive effect	Percentage showing no significant effect	Percentage showing a negative effect
Multiple countries	30	40	50	10
United States	41	41	54	5
Spain	19	74	26	0
Developing Countries	12	100	0	0
Total/Average	102	53	42	5

Although the study showed varied impact of infrastructure development on economic growth and productivity in other countries, the verdict on developing countries was unequivocally positive.

Since the pioneering work of Aschauer (1989) on the subject, many authors have acknowledged that infrastructure development is crucial to economic development (Canning and Pedroni, 1999; Kessides, 1993; Kirkpatrick *et al.*, 2006; Harris, 2003; Briceño-Garmendia *et al.*, 2004; World Bank, 1994; UNCTAD, 2008; Calderón and Servén, 2010; Sanchez

Robles, 1998; Giang and Sui Pheng, 2011). For instance, Briceno-Garmendia *et al.* (2004) indicate that reliable and affordable infrastructure can reduce poverty and thus help achieve the Millennium Development Goals. Other authors have independently corroborated this through empirical research conducted on Sub-Saharan Africa (Agenor *et al.*, 2005). Again, Sanchez- Robles (1998) found a positive impact on economic growth after a study of road length and electricity generating capacity (see also Canning and Pedroni, 1999).

A study which examined the impact of investment in telecommunication infrastructure in Nigeria on economic growth found a positive correlation (Osotimehin *et al.*, 2010). Giang and Sui Pheng (2011) argue that infrastructure has the potential to raise the productivity of other factors of production. After an assessment of empirical data from sub-Saharan Africa and comparative data from over 100 countries, Calderón *et al.* (2008) found that infrastructure development impacts economic growth and equity. Authors like Estache and Vagliasindi (2007) and Foster (2011) have submitted that deficit in power generation have limited growth in Ghana. At the continental level, it has been argued that lack of adequate infrastructure in Sub-Saharan Africa is holding back GDP growth by 2.2% (PEI, February, 2011; Foster and Briceño-Garmendia, 2010).

The general consensus in the burgeoning literature on the subject is that there is a correlation between infrastructure and economic development (Estache and Fay, 2007). It is predicted that under the right conditions, infrastructure development can play a major role in productivity and thereby help reduce poverty (Calderón and Servén, 2010b; Andrés *et al.*, 2008). It is therefore not surprising that both States and MDBs focusing on development such as the International Bank for Reconstruction and Development (IBRD) and the various regional development banks have placed a lot of premium on infrastructure development across the globe (World Bank, 1994; Briceno-Garmendia *et al.*, 2004; World Bank, 2008).

2.7. Summary

The past two decades have witnessed phenomenal increase in infrastructure development globally and particularly in developing countries. These developments have been undertaken principally by States who have been responsible for infrastructure development historically. Apart from the obviously inadequate internally generated resources, development assistance in the form of OECD-ODA, non-OECD funds and private sector-sourced funds have increased the capacity of developing countries to carry out infrastructure developments. Available evidence suggest that increased clarity of research on the impact of infrastructure development on economic development and poverty reduction has acted as a catalyst for the growing investment in infrastructure (World Bank, 2008). The next chapter examines the literature on public procurement of infrastructure in Ghana.

CHAPTER THREE

CHAPTER THREE - PROCUREMENT OF MAJOR INFRASTRUCTURE PROJECTS IN GHANA

3.1. Introduction

Realising a country's goals on infrastructure development necessarily entails the procurement of infrastructure projects. As a follow-on to the review on the trends of infrastructure development, this chapter examines the literature on infrastructure procurement generally and the process in Ghana in particular. The review entailed interrogation of databases on procurement such as the World Bank's database on Country Procurement Assessments, the United Nations Commission on International Trade Law's (UNCTAD) portal on procurement and infrastructure and the website of the Public Procurement Research Group at the University of Nottingham. Databases of the Government of Ghana, its ministries, departments and agencies (MDAs) such as the Public Procurement Authority were also explored. Key words and phrases searched included 'public procurement', 'infrastructure procurement', 'public procurement practice in developing countries' and 'procurement and dispute resolution'. This review was necessary because it furnished the context within which infrastructure-related construction disputes occurred.

Issues covered in this chapter included general information on construction and engineering procurement methods, principles governing public procurement and infrastructure procurement practice in Ghana. The review found that infrastructure procurement in Ghana suffered from several deficiencies. These included delays associated with contract formation, preparation of technical specifications and drawings, evaluation, approvals and payments. These had a snowballing effect on performance and dispute occurrence.

3.2. Procurement- Definition

The concept of procurement, in the context of construction, is broad and covers virtually the entire process of acquisition; procurement planning, the process of contractor selection, negotiation of contract terms, contract formation and contract administration (Bower, 2003;

Arrowsmith,2005; Arrowsmith, 2010). Based on the CIB W92 definition of procurement as the framework through which construction is brought about, acquired or obtained, Akintoye *et al.*(2003) have opined that procurement entails the acquisition of land, design, construction, commissioning and management of a project. Contract strategy and formation are at the core of the process. Love *et al.* (1998) identifies procurement as an organisational system that identifies relationships and assigns responsibilities among key players in the construction process. This definition, like the others, presents the contract formation process as integral to procurement. Throughout this thesis, contract formation and all issues relating to the construction contract are treated under procurement. Over the years, many procurement methods have evolved to guide both clients and contractors of major infrastructure projects. Masterman (2002) attributes the proliferation of procurement methods to factors such as client dissatisfaction, project complexity and escalating project cost.

3.3. Procurement Methods

Various authors have provided their respective classifications of the available procurement methods. Masterman (2002) identifies three categories of building procurement systems namely the separated and cooperative procurement systems, the integrated procurement systems and the management-orientated procurement systems (see also Turner, 1990; Frank, 1998; Morledge *et al*, 2006). Each system has its variants. Negotiated contracts, two-stage tendering, continuity contracts, serial contracts and the cost-reimbursable contracts are variants under the separated and cooperative procurement category (traditional methods). Variants of the integrated system (Design and Build) include package deals, design and construct and turnkey. The main methods under the management-orientated systems are management contracting, design and manage and construction management.

Bower (2003) categorizes the procurement for civil engineering projects into traditional, direct labour, management contracting, design and build, framework agreements, partnering

and alliances and their respective variants. Payment mechanisms such as fixed price, admeasurements, cost-reimbursable and target cost can also be the basis for classifying procurement strategies (Bower, 2003; Turner, 1990; Morledge *et al.*, 2006). Two observations can be made from the classifications above. Firstly, whilst most of the classifications outlined above relates to buildings, they are equally applicable to other construction and engineering works as well (Bower, 2003). Secondly, regardless of the terminology used, four categories of procurement methods can be identified. They are the traditional methods, the integrated methods, the management-orientated methods and the collaborative procurement methods. In this study, partnering is examined under the collaborative methods. Each of the methods is examined briefly.

3.3.1. The Traditional methods

The traditional procurement methods are the most pervasive of all the procurement methods available (Franks, 1998). With this method, the client, after an initial deliberation on project concept and feasibility, appoints consultants to produce detailed complete designs of the project. On the basis of the designs, tender documents, including bill of quantities, are prepared. The project is then submitted to competitive tendering at which stage contractors are required to bid on a lump sum basis. The client enters into a contract with the successful bidder who then undertakes the construction work under the supervision of the design consultants (Masterman, 2002).

Advantages of this method include the following: (a) assurance of competition; (b) fairness and minimised tender cost due to the availability of bills of quantities; and (c) potential to achieve low project cost, quality and functionality (Turner, 1990; Franks, 1998; Masterman, 2002; Morledge *et al.*, 2006). Disadvantages of these methods include the following: (a) excessive cost overruns as incomplete designs; (b) fragmentation; (c) excessive variations; (d)

disruption of work; and (e) increased completion time (Latham, 1994; Franks, 1998; National Audit Office, 2001; Morledge *et al.*, 2006).

3.3.2. Integrated Methods

Design and Build (DB) has been described as a fast track method as design and construction can take place simultaneously (Morledge *et al.*, 2006). Under this method, a single contractor takes sole responsibility for the custom-made design and construction of the project for a fixed lump sum (Griffith *et al.*, 2003). The client prepares an initial brief. It then employs a design consultant to prepare a preliminary design and other tender documents. On the basis of these, bids are obtained from selected number of contractors under a single or two-stage tendering process. The bids are evaluated on the basis of price, specification and design and the suitable bid selected to undertake both detail design and construction of the project (Masterman, 2001). DB is noted for its use in the execution of complex infrastructure projects where time is of the essence.

Advantages of DB include improve buildability, speed and improved communication. The challenge with this system, however, is the client's inability to prepare a comprehensive brief to forestall subsequent variations (Ndekugri and Turner, 1994). Other demerits include difficulty in valuing variations due to the absence of bills of quantities and expensive variation (Masterman, 2002; Morledge *et al.*, 2005).

3.3.3. The Management-orientated Methods

Management contracting, construction management and design and manage are the main variants of the management-oriented procurement methods. The common feature of these methods is the emphasis on management for a fee (Franks, 1998). Under management contracting, the client appoints a construction-based firm in addition to the design team at the initial stages. The work of this firm is to manage the entire construction process at a fee. Works are carried out by package contractors who are directly employed by the management

contractor. The latter is reimbursed by the client. Unlike management contracting, the entity employed by the client to manage the construction process under construction management is not contractually involved with the package contractors who undertake the works. The process of selection of the management contractor focuses on expertise, experience and the management fee.

Whilst price uncertainty, increased costs and greater project risks for the client remain the key disadvantages, the management-centred approaches are flexible and are able to accommodate delays and variations in the cost and scope of uncommitted work (Masterman, 2002; Morledge *et al.*, 2006).

3.3.4. The Collaborative Procurement Methods

Morledge *et al.* (2005) identify, as a key feature of all the variants of this procurement method, the transformation of the relationship between client and the project team (traditionally seen as customer/supplier relationship) into a ‘shared risk/shared reward’ team, putting their efforts together to ensure the success of a project (see also Latham, 1994; Egan, 1998; Egan, 2002). Methods here include alliancing and Private Finance Initiatives (PFI)/ Public-Private Partnerships (PPP). PPP methods entail private entities teaming up with government to provide major infrastructure projects. The private entity may be involved in the initiation, planning, design, financing, construction, maintenance, ownership and operation of a major infrastructure project (Akintoye *et al.*, 2003).

3.4. Procurement of Infrastructure projects in Ghana –Pre-Act663

The Public Procurement Act, 2003 (Act 663) is the governing law on public procurements public procurement in Ghana. During the pre-independence era, procurement was the function of the colonial administration performed by Crown agents and the Public Works Department (PWD). The former was responsible for the procurement of goods and the latter, works. After independence from British rule in 1957, a number of MDAs were established in the 1960s and

entrusted with responsibilities including carrying out infrastructure projects and providing consultancy for such acquisitions. These included Ghana National Construction Corporation (GNCC), the Electricity Corporation of Ghana (see the Statutory Corporations Act, 1964 (Act 232)), the Ghana Water and Sewerage Corporation (GWSC) (see the GWSC Act, 1965 (Act 310)) and the Architectural Engineering Services Corporation (AESC). Section 2 of Act 310, for instance, gave the GWSC mandate, *inter alia*, to make engineering survey plans and construct and operate works relating to water and sewerage. Again, the objects of AESC under section 3 of the Architectural Engineering Services Corporation Act, 1973 (NRCD 193) included carrying out technical studies in planning, design and supervision of infrastructural works. Central, Regional and District Tender Boards were set up to advice on the procurement of works.

By the mid-1990s, the public entities set up as conduits for procurement had become overwhelmed by the growing demands from the MDAs and had become inefficient (World Bank, 2003b). In 1993, the Statutory Corporations (Conversion to Companies) Act, 1993 (Act 461) was enacted to enable existing corporations to be converted into companies. The AESC, ECG and GWLC were all transformed into limited liability companies. Public entities were no longer obliged to use State institutions to carry out works on their behalf. State entities increasingly relied on private consultants and contractors to execute projects.

The literature points to the traditional method of procurement with design split from construction both in time and space, as the dominant procurement method used during the Pre-Act 663 era (Anvuur *et al.*, 2006; Kheni, 2008). The World Bank (2003b) identified selective tendering and sole sourcing as the most widely used tendering methods prior to the enactment of Act 663. The two methods were used in about two-thirds of all projects within the public sector. The other tendering method used was competitive tendering. Tender Boards set up in the 1960s and subsequently regulated under the District Tender Board Regulations,

1995 (L.I. 1606) continued to perform their roles until the coming into force of the Public Procurement Act, 2003 (Act 663).

Procurements, during the pre-Act 663 period, were plagued with several deficiencies (World Bank, 2003b). These included lack of a comprehensive legal framework with clear procedures on procurement, weak capacity of procurement staff and unclear institutional and organisational framework for procurement. There were delays in contract closure, preparation of technical specifications and drawings, evaluation, approvals and payments (World Bank, 2003). These had a snowballing effect on contract delivery, performance and disputes.

3.5. Procurement of Infrastructure – Post Act663

For the first time in Ghana, a new unified law on procurement was enacted in 2003. Act 663 had nine parts which covered issues such as the establishment of a procurement authority and structures (see Part one and two), general rules on procurement (Part three), methods of procurement (Part four) and tendering procedures (Part five). There are separate rules on engaging services of consultants (Part six). The law applies to all procurement of goods, works and services financed in whole or in part from public funds, loans obtained or guaranteed by the State and foreign aid, and activities incidental thereto such as description of requirements, invitation of sources, preparation, selection, award of contract and contract administration.

Under Act 663, competitive tendering (national and international) is the main method for contractor selection except in cases where a justification exist for the use of other tendering methods such as two-staged tendering, restricted tendering and sole-sourcing. Conditions and procedures for the use of these tendering methods are outlined in the Act. For externally funded projects where the funding agencies' procurement guideline is used, contractors were selected mainly by international competitive tendering. All procurement entities were required to use the appropriate tender documents as provided in the Fourth Schedule to the Act.

Section 50 requires that these documents shall be used with minimum modifications to be introduced through the Contract data sheet and the Special Conditions of Contract. No changes were to be made in the standard tender documents. Bids were to be opened at the time and place stipulated in the invitation documents and in the presence of all bidders. Bid evaluation criteria were to be predetermined as per the invitation documents and were to be objective and quantifiable.

Evaluation was not to be based solely on the lowest tender price but also other weighted criteria provided in the bid document. In arriving at the lowest evaluated tender, the committee had to consider the tender price in the light of any margin of preference applied, the cost of operating or maintaining the works, the functional characteristics of the works, payment or guarantee terms and national security. Section 59 of the Act additionally required that the effect of the acceptance of the tender on the national economy be considered in terms of the balance of payment position and foreign exchange reserves of the country, counter trade arrangements offered by suppliers and contractors, extent of local content, and the overall economic development potential offered by tenders.

3.6. Other rules on Infrastructure Procurement

The issue of choice of procurement method for major projects in Ghana was, in most cases, tied to donor funding requirements. As a result, there existed two streams of procurement rules namely those under Act 663 and those contained in agreements with donors or creditors. There were two instances where the provisions of Act 663 did not apply. Firstly, the Minister of State responsible for a particular procurement could decide that it was in the national interest to use a different procedure. Secondly, an applicable loan agreement, guarantee contract or foreign agreement could provide different procedure for the utilisation of such funds. Thus, the established practice of using World Bank and other donor procurement guidelines for donor funded projects in Ghana continued alongside the provisions of Act 663.

3.7. Procurement Practice

The existing literature points to the continuation of the dominance of the traditional method in practice (Anvuur *et al.*, 2006). However, there was evidence of the use of design and build and Engineer, Procure and Construct (EPC) (Ameyaw, 2011; Hensengerth, 2011). Again, there were indications that variants of public private partnership (PPP) have been employed in the water sector (Fuest and Haffner, 2007). The challenge with the literature available is the lack of details on how these procurement methods were utilised in practice.

Challenges associated with procurement of works in Ghana during the period before Act 663 was passed are well documented (World Bank, 2003b; Westring, 1997; Anvuur *et al.*, 2006; Eyiah and Cook, 2003). A study conducted after Act 663 came into force revealed very low compliance levels and a continuation of old practices and challenges (Osei-Tutu and Sarfo Mensah, 2008). Deficiencies associated with the process of infrastructure procurement often resulted in avoidable claims and disputes (World, 2003). However, there is very little information from the literature on how such claims and disputes were resolved.

3.8. Summary

At the heart of infrastructure development is procurement. Procurement methods used in building and civil engineering works include the traditional, integrated, management-centred and collaborative methods. In Ghana, the traditional procurement method was dominant in infrastructure projects delivery. There was also information on the use of other methods such as design and build, EPC and PPP. Again, where donor funds were involved, procurement guidelines of funders were used. There were several deficiencies with the extant procurement process and these resulted in claims and disputes. However, the literature provides limited information about the mode of resolution.

CHAPTER FOUR

CHAPTER FOUR - RESOLVING INFRASTRUCTURE-RELATED CONSTRUCTION DISPUTES

4.1. Introduction

This chapter surveys the literature on the resolution of infrastructure-related construction disputes. The review entailed the exploration of databases on construction, engineering, law and dispute resolution such as the American Society of Civil Engineers' (ASCE) library, Construction Information Service and Westlaw. Other databases interrogated included Lexis library, Hein online and multi-disciplinary databases such as Google Scholar, Business source complete, Emerald Insight, Elsevier (Scopus), Swetswise and Taylor and Francis online. Key phrases such as 'dispute resolution', 'construction dispute resolution', 'causes of construction disputes', 'alternative dispute resolution in construction', 'construction dispute resolution in developing countries' were searched across databases. Periodically, specific searches were ran on issues such as dispute avoidance, dispute management and dispute resolution mechanisms such as arbitration, mediation and Dispute Adjudication Boards. This chapter is the outcome of a review of the literature obtained through the internet and library searches.

The chapter presents a general overview of construction dispute resolution practice in both developed and developing countries. The literature indicated that disputes were a global phenomenon. However, differences existed on how they were resolved in developed and developing countries. In developed countries, there is a growing trend of resolving them by less costly Alternative Dispute Resolution Methods (ADR). On the other hand, the literature on developing countries, particularly those in Africa, showed that international commercial arbitration (ICA) was the dominant mechanism for resolving infrastructure-related construction disputes. There were gaps in the literature on pre-ICA resolution processes and the viability of ADR mechanisms. The chapter commences with a discussion of some introductory conceptual issues relating to claims and disputes. Then there is a brief

exploration of causes of construction disputes and the extant approaches to dispute resolution both in developed and developing countries. Finally gaps in the literature are presented.

4.2. Definition and Scope

Conflicts, disputes, differences and claims are terms used frequently by the literature on construction disputes. In a sense, these terms are related. In the case of conflicts and disputes, they are sometimes improperly used interchangeably (Fenn *et al.*, 1997). The use of these terms, without the necessary clarification as to their meaning and scope can create confusion in the mind of readers. A discussion of these terms and how they relate to each other in the context of this research is therefore important.

4.2.1. Claims

A claim has been defined as an assertion of a right (Powell-Smith and Stephenson, 1999). This may be assertion to money, property or a remedy/relief (Semple *et al.*, 1994; Powell-Smith and Stephenson, 1999). Claim is thus simply an assertion of an entitlement. In the context of construction, the term is used in reference to a request by a contractor not only for an additional money due under a construction contract (money claims) but also for an application for extension of time (Powell-Smith and Stephenson, 1999; Chappell *et al.*, 2001).

Ndekugri and Rycroft (2009) provide four legal bases for claims under a construction contract. Firstly, a contractor may make a claim expressly authorised under a contract under which a particular work is being executed. Such claims often for loss and expense are referred to as contractual claims or loss and expense claims. Secondly, a claim may be based on a breach of contract or breach of a legal duty resulting in a foreseeable damage. These categories of claim are referred to as common law claims since they have their basis in the common law (Chappell *et al.*, 2001; Powell-Smith and Stephenson, 1999). When successful, a party who makes a claim under these common law categories is entitled to unliquidated damages. Thirdly, a party may also assert a claim for restitution, typically *quantum meruit*.

Finally, some construction law texts include another set of claims often referred to as *ex gratia* claims. Ndekugri and Rycroft (2009) rightly refer to this category of claims as ‘moral’ or ‘sympathy’ claims. It is doubtful if demands under this category can legally be referred to as ‘claims’ at all. The very concept of claim is based on the existence of a right. Where no right exists, there cannot be a claim properly so-called.

Most construction claims, whether contractual or common law based, revolve around issues relating to cost, time and the correction of defects. A contractor’s claim may revolve around increased cost (loss and expense) and time in respect of excess works, unforeseen works, works shortfalls, subsequent works or any other additional works resulting from a variation (Sims and Bunch, 2003) and extension of time resulting from delays. The Employer’s claims, on the other hand, may commonly relate to delay in completion of works, failure to complete works and correcting defects (Hobeck *et al.*, 2008; Ndekugri and Rycroft, 2009).

4.2.2. Dispute

A claim is distinguishable from a dispute. Hibberd and Newman (1999) have argued that a claim is what it is; an assertion of a right under a contract and does not become a dispute until it is rejected. To Hibberd and Newman (1999), a dispute exists when there is a genuine difference of opinion over how a contractual term or condition should be interpreted or implemented. Disputes are therefore disagreements or differences which manifest themselves in ‘*distinct, justiciable issues*’ (Brown and Marriott, 1999, p. 2). In law, a dispute may be held to exist under different situations depending on the subject-matter. It is not uncommon for legislation relating to a specific area of law to delineate what will constitute a dispute in a given situation. Under section 108 of the English Housing Grant, Construction and Regeneration Act 1996, the existence of a dispute is a pre-condition for reference to adjudication. The Act, like s.82 (1) of the Arbitration Act, 1996, defines a dispute as including a difference.

There are several judicial pronouncements on what constitutes a dispute in the context of construction dispute arbitration and adjudication under English law. A number of these judicial decisions have been discussed by Ndekugri and Russell (2006) and Ndekugri and Rycroft (2009). A synopsis of the current position of the law on the definition of disputes can be found in *Amec Civil Engineering Ltd v Secretary of State for Transport (the Amec Case)* ([2004] EWHC 2339 (TCC)). In this case, the Court presided over by Jackson J. outlined seven propositions which may be useful in determining whether a dispute exist for the purposes of adjudication/arbitration after considering earlier judicial pronouncements on the issue (see the *Amec Case*, para 68). Firstly, the word ‘dispute’ must bear its normal meaning in ordinary usage (see also *Halki Shipping Corporation v. Sopex Oils Limited* [1997] 3 All ER 833(Q.B); *Halki Shipping Corporation v. Sopex Oils Limited* [1998]2 All ER 23(CA); and *Beck Peppiatt Ltd v. Norwest Holst Construction Ltd.*[2003] EWHC 822). Secondly, although the earlier decisions have not laid out a hard-edged rule for determining whether or not a dispute existed, they provided helpful guidance on the matter. Thirdly, mere assertion of right does not amount to a dispute. A dispute arises only after it emerges that a claim is not admitted (see also *Ellerine Brothers (Pty) Limited and Another v. Klinger* [1982] W.L.R. 1375; *Fastrack Contractors Limited v. Morrison Construction Limited* [2000] BLR168, para 28; *Tradax International v. Cerrahogullari TAS* [1981]3 All ER 344).

The fourth proposition outlined in the *Amec Case* is that the circumstances under which it may emerge that a claim is not admitted are wide-ranging. The Court provided four examples of such situations: (i) a claim may be expressly rejected; (ii) there may be discussions between the parties from which an inference may be drawn that a claim is not admitted; (iii) the respondent may prevaricate thus given rise to an inference that a claim is not admitted; and (iv) the respondent may remain silent thereby given rise to the inference that the claim is not admitted. The fifth proposition is an expansion of one of the examples under proposition four

namely, silence. Not every silence after a claim will amount to non-admission. Much depended on the circumstances of each case. In some cases (e.g. where the claim is well known) a short period of silence may suffice to give rise to inference of denial. Where the claim is addressed to a third party/ agent of the respondent who has a legal duty to consider the claim and provide a response, a longer period of time may be required before silence may be deemed to amount to no admission.

The sixth proposition deals with situations where a deadline for responding to claim is provided. Even though the reasons for the imposition of the deadline may be taken into account by the Court, the key consideration in such cases remains whether the time allocated for a response is reasonable. Finally, a claim must be clear enough for it to establish a duty in the recipient to respond. If the claim as presented by the claimant is so ill-defined that the respondent cannot sensibly respond to it, neither silence by the respondent nor even an express denial is likely to give rise to a dispute for the purposes of arbitration or adjudication (see the *Amec Case*, para 68, 7th proposition).

In both *Collins (Contractors) Limited v. Baltic Quay Management (1994) Limited* [2005] BLR 63 and *Amec Civil Engineering Ltd v Secretary of State for Transport* [2005] BLR 227 AC, the Court of Appeal endorsed the propositions set out by Jackson J. Nearly a decade on, the principles outlined in the *Amec Case* remain the position of the law and have been applied in a number of cases to determine whether or not disputes existed for purposes of adjudication (see *Sterling (t/a M&S Contracts) v Westminster Properties Scotland Ltd* [2007] B.L.R. 537; *Cantillon Ltd v Urvasco Ltd* [2008] EWHC 282 (TCC); *Bovis Lend Lease Ltd v Trustees of the London Clinic* [2009] EWHC 64 (TCC); *RWE NPower Plc v Alstom Power Ltd* [2010] C.I.L.L. 2835). For instance, in two recent decisions in *Gibson (Banbridge) Limited v Fermanagh District Council* [2013] NIQB 16 and *City Basements Ltd v Nordic Construction UK Ltd* QBD (TCC) 14 April 2014 (Unreported), the Courts, applying the principles outlined

in the *Amec Case*, held that failure to admit or deny a claim for payment within a reasonable time gave rise to inference of non-admission and consequently, the existence of disputes.

It has also been held in the context of arbitration that the fact that a claim is indisputable does not mean that there is no dispute. In *Hayter v Nelson and Home Insurance Company* [1990] 2 Lloyd's Rep. 265, Saville J. was of the view that so long as what was regarded as 'indisputable' could not be resolved or determined immediately, a dispute existed regardless of the fact that the issue could be determined one way or the other at an opportune time without any argument. In sum, a dispute may emerge where a claim is rejected expressly or impliedly by the respondent.

The decisions of the English Courts on the definition of disputes are logically worthy of a wider application even if only as guides (Hibberd and Newman, 1999). In any case, establishing the existence of a dispute as a prerequisite for referring an issue to adjudication or arbitration is not a feature of English construction law only. Under Clause 20 of the FIDIC 1999 and Clause 67 of FIDIC 1987, a party seeking to utilise the dispute resolution mechanisms available is required to establish the existence of a dispute (Seppala, 2005).

4.2.3. Overview of Causes of Construction Disputes

By virtue of the very nature of the construction industry whether domestic or international, disputes have been said to be inevitable. Reasons for this inevitability have been discussed in the literature (Hibberd and Newman, 1999; Seppala, 2009; Gerber and Rogers, 2000). For instance, Newey (1992) points to the size of the industry, the number of individuals and corporate entities involved, the public authorities involved in regulating the industry, the sites where work is done and the length of a project cycle as some of the rationales for this state of affairs. In his foreword to 'The ICE Arbitration Practice' (Hawker *et al.*, 1986) Lord Donaldson noted,

It may be that as a Judge, I have a distorted view of some aspects of life, but I cannot imagine a civil engineering contract, particularly one of any size, which did not give

rise to some disputes. This is not to the discredit of either party to the contract. It is simply the nature of the beast. What is to their discredit is if they fail to resolve those disputes as quickly, economically and sensibly as possible.

Considerable research has been carried out on the subject of causes of disputes over the past three decades. As shown by the synopsis below (see Table 4.1), studies on the subject have taken place in different countries across the world, thereby providing an indication that the issue of dispute is not localised. Diekmann and Nelson (1985), one of the earliest works found that disputes are predominantly the product of design errors and discretionary and mandatory changes. Since then, other studies have explored and identified several other factors contributing to the occurrence of disputes (see Table 4.1). For instance, Hewitt (1991) found that change of scope; change conditions, delay, disruption, acceleration and termination are factors which engender disputes. Conlin *et al.* (1996) identified payment and budget, performance, delay and time, negligence, quality and administration as factors giving rise to disputes.

Kumaraswamy (1997) on the situation in Hong Kong attempted not only to identify causes but to distinguish root causes from proximate or immediate causes. Unfair risk allocation, industry culture, contract issues and unrealistic objectives in relation to cost, time and quality were some of the common root causes of construction claims. The proximate causes included inadequate site investigation, inaccurate design information, incomplete contract documentation, inadequate design documentation, errors in estimates and changes by client during the course of project execution.

Table 4.1: List of studies on construction disputes (Adapted from Fenn *et al.*, 1997; Fenn, 2002; Love *et al.*, 2010)

Authors	Setting	Type of Study	Factors contributing to Claims/Disputes
Diekmann and Nelson, 1985	USA	Empirical	Design errors
			Discretionary and mandatory changes
Watts and Scrivener, 1993	Australia	Empirical	Variations
			Negligence
			Delays
Love <i>et al.</i> , 2009	Australia	Empirical	Latent conditions (pathogens) of task, practice and circumstance

Authors	Setting	Type of Study	Factors contributing to Claims/Disputes
			Adversarialism
			Contractual complexity and risk allocation
			Contract Indexicality
Diekmann <i>et al.</i> , 1994; Diekmann and Girard, 1995	USA	Empirical	Project uncertainty
			Process problems
			People issues
			Project uncertainty
Semple <i>et al.</i> , 1994	Canada	Empirical	Acceleration
			Restricted access
			Weather/cold
			Increase in scope
Bristow and Vasilopoulos, 1995	Canada	Empirical	Unrealistic expectations by parties
			Ambiguous contract documents
			Poor communications between project participants
			Lack of team spirit
			Failure of participants to deal promptly with changes and
Conlin <i>et al.</i> , 1996	UK	Empirical	Payment and budget
			Performance
			Delay and time
			Negligence
			Quality
			Administration
Ogunlana <i>et al.</i> , 1996	Thailand	Empirical	Supply problems
			Problems caused by clients and consultants
			Problems of contractor incompetence/inadequacies
Sykes, 1996	UK	Commentary	The nature of construction contracts (insufficient clarity, ambiguity and internal contradictions creating misunderstandings)
			Unpredictable future events/ unforeseen circumstances
Kumaraswamy, 1997	Hong Kong	Empirical	Inaccurate design information
			Inadequate design information
			Slow client response to decision
			Poor communication
			Unrealistic time targets
Cheung and Yiu, 2006	Hong Kong	Empirical	Listed 33 construction and behavior-related causes of disputes eg. variation, site possession issues, error in documentation etc.
Bassioni <i>et al.</i> , 2007	Egypt	Empirical	Variations caused by clients and consultants
			Problems with design/drawings /specifications
			Delays in approving shop drawings, instructions and slow decision making
Fenn, 2007	UK	Empirical	Construction and chemical processing contracts compared for impact on disputes
Hanna, 2007	USA	Commentary	Poor quality of design drawings
			Increased use of disclaimer clauses
			Shortened construction duration
			Increased shift of risks
Mitropoulos and Howell, 2001	USA	Empirical	Uncertainty
			Contractual problems
			Opportunistic behaviour
Jaffar <i>et al.</i> , 2011	Malaysia	Literature	Behavioural problems
			Contractual problems
			Technical problems

Authors	Setting	Type of Study	Factors contributing to Claims/Disputes
Love <i>et al.</i> , 2011	Australia	Empirical	Bounded rationality Opportunism
Ilter, 2012	Turkey	Empirical	Variations Late instructions from the employer Inadequate specifications Unclear contractual terms Adversarialism Unclear scope definition Poor communication Lack of familiarity with local conditions Technical inadequacy of the contractor
Rosenfeld, 2014	Israel	Empirical	Fifteen root causes of cost overrun – first three of which are premature tender documents, changes in owners' requirements or definitions and use of the traditional procurement method
Hewitt, 1991	UK	Theoretical	Change of scope Change conditions Delay Disruption Acceleration Termination
Rhys-Jones, 1994	UK	Empirical	Poor management Adversarial culture Poor communications Inadequate design Economic environment Unrealistic tendering Influence of lawyers Unrealistic client expectations Inadequate contract drafting Poor workmanship
Love <i>et al.</i> , 2010	Australia	Empirical	Nature of the task being performed (e.g. failure to detect and correct errors) People's deliberate practices (e.g. failure to oblige by contractual requirements)
Heath <i>et al.</i> (1994)	UK	Empirical	Contract terms Payments Variations Extensions of time Nomination Re-nomination Availability of information

Diekmann *et al.* (1994) and Diekmann and Girard (1995) studied data from 159 projects and categorized the project features which were predisposed to disputes into people issues (organisations, relationships, roles, responsibilities and expectations), process issues (related to how the project is procured) and project issues (project characteristics). The research was based on the hypothesis that some disputes could be predicted and thus be avoided. On the

basis of the project features identified, they developed the dispute potential index (DPI), a dispute predictor. Mitropoulos and Howell (2001) identified the uncertainty surrounding construction projects, contractual problems and opportunistic behaviour as contributory factors to disputes. For Love *et al.* (2010), a combination of pathogens (latent conditions acting as stimuli for dispute occurrence) such as tasks, practices, circumstances and organisations and active failures from people involved in projects such as slips, lapses and procedural violations are the real underlying conditions for disputes.

It appears nearly all aspects of the construction process have been named as likely sources of claims or disputes (see e.g. Killian, 2003; Fryer *et al.*, 2004). Most studies offer some kind of classification for dispute causes. Consequently, there are as many classifications as there are different studies. This situation may be as a result of the terminological muddle associated with the undefined use of terms such as ‘claims’, ‘disputes’, ‘conflicts’, ‘causes’, and ‘sources’ and the lack of framework (see Fenn *et al.*, 2002; Fenn, 2007). Examination of the studies on disputes also raises the question of why all the studies? If the aim is to provide a framework which will help deal with disputes by way of predicting them, then only few studies have their focus on such venture (Diekmann *et al.*, 1994; Diekmann and Girard, 1995; Mitropoulos and Howell, 2001; Love *et al.*, 2010b; Love *et al.*, 2010a; Ilter, 2012). Yet, it has been argued that dispute prediction must be at the heart of every avoidance strategy (Fenn, 2007).

Nevertheless, factors underscoring the project owner’s contribution to disputes such as changes in owners’ requirement, poor definition of scope of work, variations, delays and payment issues cut across most of the findings on factors leading to disputes (see Table 4.1). Apart from direct contribution as outlined above, poor quality documents and poor performance by consultants can also be laid at the owner’s door since it is ultimately responsible for all such arrangements.

In relation to international construction transactions, Seppala (2009) has argued that dispute causes are fundamentally similar to those in the domestic setting. Beyond the general, the oft-cited reasons for the occurrence of disputes include the involvement of different parties and professionals with distinct interest and cultural backgrounds, multiple linked contracts, complexity of projects, the involvement of State parties and third party funders as well as political and economic concerns (Schwartz, 1995; Bockstiegel, 1999; Chan *et al.*, 2006; Draetta, 2011; Fellows and Liu, 2008). Dispute causes on infrastructure projects are pervasive in developing countries due to lack of adequate knowledge of construction law, bureaucracy and lack of institutional structures to ensure compliance with contracts (World Bank, 2003; Anvuur *et al.*, 2006; Chan *et al.*, 2006).

4.3. Major Construction Dispute Resolution - Options in Developed Countries

Traditionally, the construction industry resolved disputes arising from projects through litigation and arbitration. Whitfield (1994), reports that 250 writs relating to construction disputes were issued in the UK in 1960. He asserts that this number increased five-fold by 1990. This assertion is confirmed by Mix (1996-97) who reports that absolute litigiousness characterized the construction industry of the United States in the 1980s. All these have changed considerably in the course of the past two decades with more attention turned to the use of alternative dispute resolution (Gaitskell, 2005).

From the literature on the subject, alternative dispute resolution mechanisms are increasingly being used in the construction industry both domestically and at the international level in addition to litigation and arbitration (Schwartz, 1995; Seppala, 2005; Draetta, 2011). Reasons accounting for the proliferation of dispute resolution mechanisms in the construction industry include concerns about cost, delays and rigid procedural requirements (Hobeck *et al.*, 2008. See also Table 4.2 below). In addition to providing a rationale for the use of ADR, the

reasons outlined in Table 4.2 also constitute attributes of ADR mechanisms and serve as benchmark for selecting, measuring and prioritising them.

Table 4.2: Reasons affecting the selection of dispute resolution mechanisms

	Selected Literature	Attributes
1	Cheung, 1999	Nature of decision(whether binding or not), Economy (cost), Confidentiality, Control over proceedings, Creative remedies, Enforceability, Fairness, Flexibility, Privacy, Speed, Width of remedy and Preservation of relationships.
2	Gaitskell, 2006	Contractual procedure dispute resolution, confidentiality, working relationships, speed, Statutory limitation, Cost and Complexity
3	Hobeck <i>et al.</i> , 2008	Predictability, flexibility, swiftness, effectiveness and robustness.
4	Ndekugri and Rycroft, 2009 (in the context of arbitration and litigation)	Cost, Simplicity of Procedure, Expertise, Advocacy, Expedition, Convenience, Courtesy, Privacy, Confidentiality, Future business relations, Powers of the third party Neutral, Summary relief, Finality and national sovereignty
5	Blake <i>et al.</i> , 2011	Cost, Speed of settlement, Control of process, Choice of forum, consideration of wide range of issues in the course of process, Wide range of potential outcomes, Client satisfaction, Process flexibility, Possible reduction of risk of win/lose, Expert knowledge required, Confidentiality, Court order required, judicial precedent needed, Future relationships, Chance of success, enforcement etc.

Generally, the various resolution mechanisms are often categorised on the basis of factors such as party control, outcomes (whether binding or non-binding), involvement of an independent third party and decision-making (Blake *et al.*, 2011). The literature on construction dispute resolution tends to categorise the mechanisms in terms of their ultimate goals namely dispute prevention, management and resolution (Fenn *et al.*, 1997; Cheung, 1999; Morgan, 2008; Hinchey, 2012).

4.3.1. Dispute Avoidance and Management

Dispute avoidance approaches focus on the initial stages of a project and aim at ensuring that the parties start right so as to reduce or prevent the occurrence of disputes (Vorster, 1993; Yates and Duran, 2006). The literature identifies a broad range of dispute avoidance

techniques most of which fall under one or the other of the following four areas. These are the use of standing neutrals, procurement and relational contracting, effective project management, and planning and general preparation. On the first set of techniques, Gerber (2000) identifies three main standing neutrals (Dispute Avoidance Procedures (DAPs)) for purposes of dispute avoidance. These are the Dispute Resolution Adviser (DRA) (Project Neutral or Dispute Resolution Expert (DRE)) (see also Cheung and Yeung, 1998), Dispute Adjudication Boards and Dispute Review Boards (see also Harmon, 2003; Yates and Duran, 2006 and Ng *et al.*, 2007).

The second set of avoidance techniques uses procurement and related processes to manage relationships so as to avoid or reduce disputes. Examples of this set of techniques are partnering, alliancing and related integrated project delivery systems and equitable risk allocation (Cowan, 1991; Construction Industry Institute, 1991; Crowley and Karim, 1995; C.I.B, 1997; Critchlow, 1998; Stehbins *et al.*, 1999; Bresnen and Marshall, 2000; Harmon, 2003; Doug, 2006; Hanna, 2007; Ross, 2009; Kratzsch, 2010; Le Nguyen, 2011; Hinchey, 2012). These methods focus on maintaining good relationships and healthy communication links among project teams and engender a cultural shift. It is envisaged that such change in project environment will encourage parties to resolve their differences more easily and thus avoid disputes.

The third set of avoidance techniques is management-related. The focus of these techniques is on ensuring effective documentation, cost and schedule control, quality management and constructability (Fenn *et al.*, 1997; Yates and Duran, 2006; Ng *et al.*, 2007). Morgan (2008) recommends about thirteen such avoidance techniques. These include preparing staff for projects, being abreast with the terms of the contract and ensuring compliance, identifying potential dispute area, effective communication and disclosure of information. The final set of avoidance techniques entails activities relating to general

planning and preparation for projects (Mitropoulos and Howell, 2001). The effectiveness of these avoidance strategies can be greatly boosted if dispute causes can be sufficiently predicted at the inception of projects (Diekmann *et al.*, 1994; Fenn, 2007).

Some of the techniques listed under avoidance are also used for dispute management. These include the use of standing neutrals and negotiations. The idea underpinning dispute management is to ensure that festering disputes are nipped in the bud and not allowed to escalate. The current approach to dispute avoidance and management is summed up in the two-pronged approach to dispute avoidance by the Dispute Prevention and Resolution Task Force of the Construction Industry Institute (CII) which require parties to ‘start right’ and ‘stay right’ (Vorster, 1993; Diekmann and Girard, 1995; Yates and Duran, 2006).

The avoidance and management techniques are often implemented alongside the resolution mechanisms. Mediation, adjudication, expert determination, dispute review boards and early neutral evaluation are common among construction industry users in the United Kingdom, the United States, Australia, Singapore and Hong Kong (Hibberd and Newman, 1999; Gaitskell, 2005; Gaitskell, 2006; Rana, 2009). These options are dominant both in minor and major construction projects (Levin, 1998; Harmon, 2003). Some of the main dispute resolution mechanisms commonly used in the construction industry are briefly examined.

4.3.2. Negotiation

This is an informal process where parties to a dispute either by themselves or through their representatives discuss some or all their issues with a view to resolve them on agreed terms (Blake *et al.*, 2011). Whilst the role of negotiations in dispute resolution is endorsed by many authors, others are unconvinced that negotiation qualifies as an ADR process (Brown and Marriott, 2011). To Brown and Marriott (1999), there is no ADR unless the process of resolving a dispute involves an intervention by a third party neutral and a structured process framework. The general view of the construction literature appears to disagree with the

argument excluding negotiation from the list ADR options (Fenn *et al.*, 1997; Cheung, 1999). There are no formal rules or procedure for this resolution option. However, over the years, strategies and tactics have emerged which parties may adopt in terms of approach. These include competitive, cooperative or collaborative tactics (Menkel-Meadow *et al.*, 2005; Blake *et al.*, 2011).

The strengths of this process lie in its flexibility, the opportunity it offers to parties to fashion out their own terms of settlement at a very low cost, and the privacy and confidentiality it offers. Its consensual nature remains its strength and a weakness at the same time. Parties can engage in negotiation at any time during the life span of a dispute even if other resolution mechanisms are being used. However, because it thrives on consent, a party ready to negotiate cannot compel another who is unwilling to participate. For the construction industry where the culture of claims exist, many disagreements between a claimant and a client or its representative over such claims are resolved through negotiations (Love *et al.*, 2010b). In terms of speed, efficiency and cost reduction, much depends on the preparation of the parties involved (Blake *et al.*, 2011). Where parties are unprepared or the issues involved are complex technical or legal, the outcome may be less successful.

4.3.3. Mediation and Conciliation

Where parties are unable to resolve their differences by negotiations or they envisage that this may not be possible, they may seek the assistance of a third party neutral to help them arrive at settlement. Mediation is one of many third party procedures available. In mediation, the parties own both the processes leading to a decision and the outcome itself. The mediator, who is required to be independent, neutral and impartial, is expected to help the parties through what is often a private and confidential process aim at finding a mutually acceptable solution without making a finding of his own or expressing a bias (Gaitskell, 2006; Uff, 2009). The mediator's role, among others, is to create an opportunity and the environment for

parties to meet and discuss their dispute. The mediator plays this role by ensuring that the parties put their cases across, learn each other's positions, explore their real needs and focus on the issues at stake (Brown and Marriott, 1999; Stitt, 2004). The mediator's authority is from the parties who appoint him. He has no power to decide the dispute.

As a facilitated negotiation, mediation is informal and come in different shades. It may be facilitative, evaluative or transformative in style (Brown and Marriott, 1999; Stitt, 2004; Brooker, 2007). In facilitative mediation, the mediator's role goes no further than creating the environment conducive for the parties to seek their own solutions. This is achieved by helping the parties to focus on the issues at stake rather than extraneous issues which might have crept into the dispute.

Evaluative mediation on the other hand goes further with the mediator's role including assessing parties' positions based on merits (that is, their rights and likely chances of success in a court of law) (Stitt, 2004). On the basis of such evaluations, the mediator may give an indication as to which party's case is stronger and suggest a solution which the parties may then consider. Such mediator positions remain suggestions only and are not binding on the parties. In this respect, evaluative mediation is akin to other evaluative processes like mini-trial and early neutral evaluation.

There is considerable disagreement in the literature on the relationship between mediation and conciliation (Hibberd and Newman, 1999). Some authors opine that the words 'conciliation' and 'mediation' are used interchangeably (Brown and Marriott, 1999) and attempts at distinguishing them amounts to 'nit-picking and is *'only of academic interest'* (Hibberd and Newman, 1999, p.59). Gaitskell (2006) asserts that evaluative mediation is often referred to as conciliation in the United Kingdom. On the other hand, a report by UNCTAD in 2010 on ADR and investor-State disputes identified three main distinctions between conciliation and mediation namely degree of control, focus and degree of formality. Whilst

conciliation is more formal, evaluative in nature and focuses less on relationship-building, the reverse is the case for mediation (UNCTAD, 2010b). Transformative mediation places more emphasis on process rather than outcome and is more interested in behavioural change in future dealings (Brown and Marriott, 2011).

Mediation and conciliation have numerous strengths and weaknesses. Some of the accusations against the use of mediation include lack of compulsion, reliance on a party's voluntary participation and issues with enforcement of outcomes. Other factors which are often publicised as weaknesses of mediation include the perception that the one advocating for mediation has a weak case, fear that mediation will delay the commencement of litigation (with the associated danger of having the action declared statute barred) or arbitration and the concern that a party may reveal their strong points to an opponent (Blake *et al.*, 2011).

Notwithstanding the outlined concerns with mediation, many private and public institutions in the developed world are increasingly turning to mediation as preferred means of resolving construction disputes (Hibberd and Newman, 1999; Harmon, 2003; Blake *et al.*, 2011; Gaitskell, 2005; Blake *et al.*, 2011). Many standard form contracts for major construction works, particularly those which advocate for relationship-based procurement strategies, such as partnering, contain provisions on mediation as part of a tiered dispute resolution strategy. Examples of such forms are JCT Framework Agreement, JCT Constructing Excellence Contracts, 2006 & 2011, NEC ECC Edition 3 (Partnering Option X 12), ACA Standard Form of Contract for Project Partnering PPC2000 and SPC 2000 Perform 21 Public Sector Partnering Contract, 2005 (Clamp *et al.*, 2007). Flexibility of process, savings in cost and time and the empowerment of parties with ownership and control over the resolution process are some of the advantages associated with the use of mediation (Blake *et al.*, 2011). The process offers parties in an on-going relationship a less acrimonious way to deal with their disputes

and help them maintain, and in some cases, strengthen their existing commercial relationships (Fuller, 1971).

4.3.4. Early Neutral Evaluation

Like mediation, early neutral evaluation (ENE) is a non-binding third party neutral process. In many respects, this process shares common features with evaluative mediation (Blake *et al.*, 2011). ENE involves a process where parties request a neutral to evaluate various issues involved in a dispute on the basis of the law to ascertain the merits of the parties' cases as a preliminary step towards using other resolution processes (Gaitskell, 2006). It is a private and confidential process. Who carries out the evaluation, the extent of the evaluation and the timing of the evaluation depends on the parties. As a consensual non-binding process, it suffers from similar weaknesses as mediation. Its strength lies in the information or the assessment which is made available to parties prior to or in the course of the use of other dispute resolution processes.

4.3.5. Dispute Boards

A Dispute Board (DB), another resolution mechanism involving the use of neutrals, may consist of one or three independent, experienced experts who are jointly appointed by the parties to a construction or engineering project at the onset of a project and prior to the emergence of disputes (Harmon, 2009). The panel remains in existence throughout the life span of a project. Its main task is to deal with disputes as they occur or indeed nip incipient disputes in the bud before they bloom into obdurate disputes (Thompson and Vorster, 2000). To perform its role effectively, the panel must have a good knowledge of the project and its progression. Thus, the DB has access to project documents and pays regular visits to project sites where representatives of the parties are met and discussions about progress of work and any pending issues are undertaken (Gerber and Rogers, 2000; Harmon, 2003; McMillan and Rubin, 2005). When a dispute arises that the parties are unable to resolve through negotiations,

such a dispute is passed on to the DB. After following informal procedures often agreed with the parties, the issues in contention will be examined and a decision reached. The type of decision that is arrived at depends on the variant of DB which is used (Matyas *et al.*, 1996; Ndekugri *et al.*, 2013).

The two main types of DB are Dispute Review Board (DRB) and Dispute Adjudication Board (DAB). After hearing the parties' positions on issues in contention and examining the available evidence, both physical and documentary, a DRB will issue a non-binding decision referred to as a recommendation (McMillan and Rubin, 2005). The parties may accept or reject some or all the recommendations. The decision of the DAB is however binding unless a settlement is reached, a notice of dissatisfaction is served or the issue is decided by arbitration or litigation as per the contract between the parties (Gerber and Rogers, 2000; Harmon, 2003). Ndekugri *et al.* (2013) cautions that parties need to look at substance and not form to determine whether a particular arrangement is a DAB or DRB as the form may be deceptive. As compared to the DRB, the DAB format is more structured and formal with strict timelines on the service of notice and particulars of dispute and timeframe for decision-making.

DRB originated from the United States of America. There is some unanimity in the literature that DRB in its current form was first used during the construction of the Eisenhower Tunnel (Second bore) in Colorado, United States in 1975, even though its emergence can be traced to an earlier time (Hibberd and Newman, 1999). Since 1975, DRB has been used on major civil engineering and construction projects in the United States, Canada, Australia, South Africa, Denmark, Ethiopia, Italy, Uganda, India, China and many other countries (Gerber and Rogers, 2000; DRBF, 2012). Since its inception in 1996, the Dispute Resolution Board Foundation, an entity dedicated to the promotion of DRB, has kept a database of projects on which DRB has been used. The data set date back to 1975. As of 2006, DRB had been used on one thousand, four hundred and thirty-four projects (recorded)

across the globe, with total project value of \$ 97.637 billion. The individual project values range between \$ 1 million and \$ 14.7 billion. Some of the notable projects which have used the DRB include the Channel Tunnel and the Lesotho Highlands Water Projects. The DRBF report indicates a high success rate in dealing with disputes with DRB. Out of a total of one thousand, eight hundred and sixty recorded disputes which have been heard by DRBs, one thousand, seven hundred and eighteen were settled. Only fifty-three disputes were settled by other dispute resolution methods. Whilst this database may have limitations in terms of its capacity to cover all projects using DRB around the world, it is indicative of the extent of use.

Dispute Adjudication Boards, on the other hand, owe their widespread use mainly to the sponsorship of two key institutions involved in major infrastructure procurement and delivery in most parts of the world; the World Bank and the *Fédération Internationale Des Ingénieurs-Conseils* (FIDIC) (Chapman, 2006; Ndekugri *et al.*, 2013). The World Bank which had been involved in the construction of the El Cajon Hydroelectric Project in Honduras between 1980 and 1986 had experienced the effectiveness of the DRB concept and saw its variant, the DAB, as a suitable replacement for the long-standing quasi-judicial role of the Engineer or the Architect as the arbiter of disputes arising in the course of projects (Chapman, 2006; Ndekugri *et al.*, 2013). Whilst the existence of an on-the-job arbiter on construction projects has been viewed as crucial and useful, Ndekugri *et al.* (2007) state that the individual who played this role (the Engineer or Architect) had been the subject-matter of discontent for several decades due to his lack of neutrality and affiliation with the client. The Bank's recommendation of DABs as a dispute resolution alternative to the independent engineer for construction projects financed by it became a mandatory requirement for all bank-funded major construction projects in 1994.

In response to the Bank's decision, FIDIC initiated various changes which culminated in the replacement of the Engineer/Architect as the on-the-job arbiter of the first instance with

the DAB. With the adoption of the 1999 FIDIC Red book and subsequent versions (e.g. the Multilateral Development Bank Harmonised Edition, 2010) by the World Bank for its projects, DAB has now become an entrenched part of the dispute resolution strategy under many project contracts particularly in developing countries. Cost of retaining three experts over the life span of a project remains the key challenge to the use of DRB or DABs.

4.3.6. Expert Determination

Expert determination is one of the third party processes by which parties involved in a dispute may have their dispute resolved with finality. The parties may agree at the time of the formation of the contract or at the occurrence of a dispute to appoint a third party with expertise in the subject area to which the disputed matter belong to make a final or interim determination of disputes. The powers and the activities of the expert are defined by the parties. They determine the scope of the dispute the expert is to settle and the procedure, but the expert thereafter will have the right to add to the procedure unless expressly prohibited from doing so.

Unlike arbitration, expert determination is not a judicial process and is thus not subject to the strict rules of natural justice, though the expert is required to act fairly and impartially (Gaitskell, 2006; Blake *et al.*, 2011). In *Macro & Others v. Thompson & Others (No.3)* [1997] 2BCLC 36 it was held that apparent partiality will not be sufficient to set aside the decision of an expert. Proven bias, however, will be sufficient. Another fact that distinguishes expert determination from arbitration is its flexibility. Apart from the limitation on the expert to make a decision within the boundaries of his instructions as given by the parties, he has the liberty to employ his own skills and expertise to determine the dispute at hand (Gaitskell, 2006). He is bound neither by the submissions of the parties nor the evidence presented to him. His approach to the resolution process may be inquisitorial in nature. He may determine the matter according to his own opinion formed on the basis of his own investigations

(Dundas, 2008). Currently, the law regulating expert determination in the United Kingdom is the common law.

The issue of what kind of dispute can be referred to an expert does not suffer any of the confusion associated with arbitrability for example. Every matter which the parties have power to resolve by themselves can be the subject of expert determination (Dundas, 2008). It has been indicated that it is most useful where the subject matter of the dispute is highly technical (Blake *et al.*, 2011). The mechanism has been used to resolve disputes in computing (Blunt and Osborne, 2011), insurance (*Halifax Life Ltd v Equitable Life Assurance Society* [2007] 2 All E.R. (Comm)), shipping (*Bernhard Schulte GmbH & Co KG v Nile Holdings Ltd* [2004] 2 Lloyd's Rep. 352), engineering and construction and energy (Gaitskell, 2006; Dundas, 2008).

There is a burgeoning jurisprudence on the mechanism under English law addressing questions such as: (i) the appropriateness of expert determination for all disputes; (ii) whether a stay can be granted for parties to resort to an expert; (iii) whether or not an expert is obliged to give reasons for his/her decisions; and (iv) under what circumstances the decision of an expert may be set aside (see *Thames Valley Power Ltd v Total Gas & Power Ltd* [2005] EWHC 2208 (Comm); *Bernhard Schulte GmbH & Co KG v Nile Holdings Ltd* [2004] EWHC 977 (Comm)). Only fraud or manifest error including material deviation from the instructions of the parties can result in the setting aside of the decision of the expert (*Veba Oil Supply & Trading Ltd v Petrotrade Inc (The Robin)* [2002] 1 All E.R. 703; see also Dundas, 2008). The authorities also distinguish between a mistake by an expert and a departure from instructions; whilst the former will have no effect on the binding nature of the expert's decision, the latter does (*Ackerman v Ackerman* [2011] EWHC 3428 (Ch)).

In the context of international transactions, it has been argued that issues of enforcement may render expert decisions less attractive as compared to an award (Gaitskell, 2006). The

way out is to incorporate into the agreement stipulating the use of expert determination that the decision will be interim and subject to a final reference to arbitration for enforcement (Gaitskell, 2006).

4.3.7. Adjudication

In the present context, the term adjudication is used as a term of art. It refers to an essentially interim dispute resolution mechanism which allows a third party neutral, called the adjudicator, to determine construction disputes submitted to him under the terms of a contract or a statute. The outcome is binding until a final decision is made on the dispute by a court or an arbitral tribunal. There are essentially two kinds of adjudications; contractual and statutory. In countries such as the United Kingdom, Singapore, New Zealand and Australia, statutes have been enacted to regulate the process of adjudication. In other countries such as South Africa and Ghana adjudication is based on contract. Tackaberry (2009) observe that the defining moment for adjudication in England was marked by the Latham recommendations which eventually culminated in the enactment of the Housing Grants, Construction and Regeneration Act, 1996 (HGCR) as amended by the Local Democracy, Economic Development and Construction Act, 2009 (LDEDCA). The core essence of statutory adjudication in most of the jurisdictions where it exists is to ensure payment security. No statute reflects this intention better than the New South Wales Building and Construction Industry Security of Payment Act, 1999. It is worth mentioning that beyond this core goal, some of the statutes on adjudication such as the HGCR and the New Zealand legislation do not limit the kinds of disputes which can be submitted to adjudication to only monetary claims.

Adjudicators are required to act fairly and swiftly. The basic idea of the process is ‘pay now, argue later’ (see *RJT Consulting Engineers Ltd v. DM Engineering (Northern Ireland) Ltd.* [2002] 1 WLR 2344; Blake *et al.*, 2011). Speed is assured through strict time-lines

allowing for extension under certain circumstances. As an interim mechanism manned by persons who often lack enforcement powers, the courts remain the ultimate avenue for enforcement where decisions rendered by adjudicators are not complied with promptly. The ambit of contractual adjudication is determined by the parties. They may decide on whom to appoint as an adjudicator, what issues to refer to an adjudicator, timeframe for the adjudicator and the extent to which parties may be bound by the decision of the adjudicator.

4.3.8. Arbitration

Arbitration is one of (if not) the commonest dispute resolution mechanisms among parties involved in the construction industry. Like all the other dispute resolution mechanisms discussed above, arbitration is based on an agreement between parties to refer a dispute or a difference to a third party neutral, an arbitrator, who is clothed with authority by virtue of his instructions to make a binding award (Tackaberry and Marriott, 2003). In *Fili Shipping Co Ltd and others v Premium Nafta Products Ltd and others* [2007] UKHL 40, para 6, Lord Hoffmann outlined the fundamental principles or purposes of arbitration as: (i) existence of a relationship between parties; (ii) an agreement to submit future disputes to a chosen tribunal based on factors such as privacy, neutrality and expertise; (iii) selection of a seat for the resolution process based on the availability of legal services and the ‘unobtrusive efficiency of its supervisory law’; (iv) the need for quick and efficient determination of disputes; and (v) avoidance of delay and partiality of national courts in the case of international transactions. Another feature of arbitration is the delivery of binding outcomes which may be enforced in many parts of the world.

Arbitration may be domestic or international (see section 4.4.1). At the national level, most countries have enacted legislations which regulate the practice of arbitration by providing default rules for situations where parties fail to agree. On the international stage, arbitration has benefitted from near universal patronage due to treatise such as the Convention on the

Recognition and Enforcement of Foreign Arbitral Awards, 1958 and the promotion efforts by organisations such as the United Nations Commission on International Trade Law (UNCITRAL). Generally, key points of arbitration will include the existence and scope of the arbitration agreement, the seat of arbitration, appointment of arbitrators and jurisdictional issues (Redfern, 2004). The arbitration proceedings and issues concerning the arbitral award and enforcement are also among the core elements of this popular dispute resolution processes.

4.4. Developing Countries and Construction Dispute Resolution

Disputes arising from transactions within a State fall within the jurisdiction of the national courts (Mante *et al.*, 2011). However, the involvement of foreign participants in international transactions within developing countries has changed the dynamics of this principle. National courts have lost their appeal as the preferred choice for settling disputes arising from such transactions due to perceived bias against foreign parties, over-crowded national courts, lack of confidentiality and issues with enforcement of foreign judgments (Leahy and Pierce, 1985-86; Perloff, 1992; McLaughlin, 1979). The need for fair and final decisions, jurisdictional neutrality, privacy, confidentiality and party autonomy has led to the choice of ICA as the preferred mechanism for dispute resolution in international transactions including infrastructure procurement (Cotran and Amissah, 1996; Asouzu, 2001; Tackaberry and Marriott, 2003; Redfern, 2004; Blackaby *et al.*, 2009).

The growth of ICA in developing countries can be examined from two perspectives, legal and institutional developments. In respect of legal developments, two international instruments have been crucial. These are the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, 1958 (the New York Convention) and the UNCITRAL Model Law on International Commercial Arbitration, 1985 (as amended in 2006) (the Model Law). The main objective of the New York Convention is to commit States to give effect to

agreements to arbitrate and to enforce within their territories foreign arbitral awards which satisfy certain agreed criteria for validity and legitimacy (the New York Convention, Article III). Currently, 149 countries are parties to this treaty. Even in Latin America, a region noted for its support of the Calvo doctrine (which insisted on non-intervention and absolute equality of foreigners with nationals in dealings by States with foreign nationals), it is reported that all countries within the region have signed on to the New York Convention as of 2003 (Bernal, 2009). The UNCITRAL Model Law, on its part, aims at eliminating the inadequacies of national laws and disparities between them. To this end it sets out a special procedural regime for ICA. Currently, over 70 States, many of them developing nations, have adopted national arbitration legislations based on the Model law.

Beyond the global efforts, there have been regional efforts to develop international arbitration. For example, the Organization for the Harmonization of Business Law in Africa (OHADA) set up by treaty in 1993 with sixteen mainly francophone West and Central African member States, aims at harmonizing business laws among members. As part of its activities it has adopted a uniform Arbitration Act, set up a court, and developed its own arbitration procedures (Dickerson, 2005).

Regarding institutional developments, international arbitral institutions in Europe have traditionally served as venues for ICA involving many developing countries and foreign entities. Examples of such institutions are the International Court of Arbitration of the International Chamber of Commerce (ICC), the London Court of International Arbitration (LCIA), and the International Centre for Settlement of Investment Disputes (ICSID). Recently, other arbitral institutions have been set up in Hong Kong, Singapore, China, Dubai, Cairo and Nigeria. The Asian-African Legal Consultative Organisation (AALCO) has been instrumental in the effort to 'regionalise' arbitration centres (Sempasa, 1992; Asouzu, 2001; Asouzu, 2006). AALCO's efforts led to the setting up of regional centres in Cairo and

Nigeria. The rationale was to bring ICA closer to countries in Asia and Africa (Asouzu, 2001).

Generally, little exists by way of literature on infrastructure-related construction dispute resolution in developing countries, particularly those in Africa. The limited literature identified so far has revealed that ICA remains the dominant resolution mechanism in all commercial transactions (Tiewul and Tsegah, 1975; Sempasa, 1992; Cotran and Amissah, 1996; Asouzu, 2001). Virtually all standard form contracts governing construction transactions in developing countries (notably the FIDIC suite of contracts) contain provisions on ICA (Tackaberry and Marriott, 2003). The literature on dispute resolution in Africa primarily focus on problems posed by ICA to developing countries (Yelpaala, 2006; Asante, 1993; Asouzu, 2001; Sempasa, 1992). These problems are divided into the generic and peculiar.

4.4.1. Generic Problems with ICA

Key issues under the generic category of problems with ICA are cost and delays (Asouzu, 2001). Regarding cost, infrastructure-related construction disputes are often resolved at great cost to developing countries. A good example is the case of *Lesotho Highlands Development Authority (Respondents) v. Impregilo SpA and Others* [2005] UKHL 43. In 1991 (after a sixty year preparatory period), the Lesotho Highlands Development Authority engaged a consortium of seven companies from the United Kingdom, South Africa, Italy, Germany and France to construct the Katse Dam. Disputes arising from this project over reimbursement of cost and adjustment to rates ended up in the English Supreme Court after the engineer's determination and international arbitration. What is worrying is that Lesotho, a small landlocked developing country with serious human development challenges had to bear the cost of the arbitration and protracted litigation outside its jurisdiction.

In a study on investor-State arbitrations, UNCTAD found that the cost of arbitration generally has increased drastically (UNCTAD, 2010a). Whilst legal fees constitute about 60% of expenses, arbitrators' fees, administration fees of arbitral centres, expenses of witnesses and experts also constituted substantial cost. Referring to previous UNCTAD reports (UNCTAD 2005b, 2006a, 2008a and 2009) the 2010 report cited four cases to support the conclusion on cost of arbitration. In *Plama Consortium v. Bulgaria* (ICSID Case Number ARB /03/24), the legal cost for the claimant amounted to US\$4.6 million whilst that of the respondent amounted to US\$ 13.2 million. The claimant's legal cost in *Pey Casado v. Chile* (ICSID Case Number ARB/98/2) relating to the jurisdictional and merit phases of the arbitration amounted to US\$ 11million, whilst that of the respondent amounted to US\$ 4.3 million. In *ADC Affiliate Limited and ADC & ADMC Management Limited v. The Republic of Hungary* (ICSID Case Number ARB/03/16) the respondent country had to pay US\$7.6 million in legal cost. Finally, in *Waguih Elie George Siag and Clorinda Vecchi v. The Arab Republic of Egypt* (ICSID Case Number ARB/05/15), the respondent was obliged to pay an amount of \$6 million as legal costs, expert and other expenses.

These examples relating to investment are not far-fetched as international investment agreements often define investment to include, '*claims to money and claims under a contract having a financial value*' (UNCTAD, 2011, p.9). Thus, the issue of the rising cost of ICA is a common attribute of both investment and construction disputes.

Regarding delays, ICA was reputed for its swiftness (Ehrenhaft, 1977). However, this feature of ICA has been questioned as cases take more time to resolve (UNCTAD, 2010a). Indeed, ICA has been described as a highly complex commercial litigation (Oh, 1981). Though this description was provided some thirty years ago, it remains true. Nearly all the procedural complexities associated with a court proceeding can be found in most arbitral hearings involving huge projects. The consequences of these are delays. The impact of delays

on project delivery and increased project cost is hackneyed, and particularly severe on developing countries.

4.4.2. Peculiar Concerns with ICA

The second category of concerns with ICA relate to those peculiar to developing countries. Asouzu (2001) draws attention to some factors in the current international regime for dispute resolution which are causing serious disaffections in the developing world. He observed that there is a perception of bias against African States involved in international dispute resolution processes. Factors fuelling the perception of bias identified by Asouzu (2001) include absence of African arbitrators on arbitration panels in the West, the choice of American and European venues or arbitration centres over equally well established ones in Africa and the long-standing arguments of lack of judicial infrastructure, qualified personnel and fair hearing.

Asouzu's recommendations focused on regionalizing arbitral centres and awareness creation, but are dismissive of development of alternatives such as mediation, dispute boards and other ADR mechanisms. On the absence of African arbitrators on international arbitration panels, most Arbitration Rules permit parties to nominate an arbitrator, whether the requirement is for one or three arbitrators. Most developing countries end up selecting arbitrators from the developed world due to lack of local experts (Asouzu, 2006).

4.4.3. Resolving Major construction Disputes in Ghana

The process of infrastructure-related construction dispute resolution in Ghana is largely unexplored. Some work has been done in the area of investment dispute resolution (see Tiewul, 1974; Asante, 1993; Asante, 1996). These works have focused on issues such as dispute resolution options and enforcement of arbitral awards. Asante (1998), for instance, has argued in respect of choice of dispute resolution mechanisms where foreign investment is involved as follows:

A foreign investor may insist on the reference of disputes arising from the joint venture to international arbitration. This may be an aspect of the investor's overriding

concern to insulate the joint venture from the local judicial process as an insurance of fair adjudication. In this regard, it should be pointed out that most developing countries involved in negotiating international business transactions recognise the virtual inevitability of international commercial arbitration. Indeed, the acceptance of international arbitration has become an invariable ingredient of the liberalization package which developing countries provide as a *sine qua none* of their strategies to attract foreign investment, technology, international finance and foreign trade (Asante, 1998,p.71).

As to whether a similar rationale applies to construction dispute resolution is unclear. What is clear however is that arbitration has long been considered a useful mechanism in the resolution of private disputes of international character. As early as 1961, Ghana had enacted arbitration law which acknowledged foreign awards and catered for their treatment under Ghanaian law. This law has been replaced by the Alternative Dispute Resolution Act, 2010 (Act 798). Commentaries on dispute resolution from authors such as Torgbor (2011) provide a generic reflection on Act798 with no specific treatment of the issue in the context of infrastructure-related construction disputes in Ghana. Sarkodie's (2011) exposition on Act 798 examines the Act and its possible impact on international construction arbitration. He argues that the only alternative to international arbitration is litigation in the domestic courts. What is clear from the commentary, however, is that it is based on provisions of Act 798 and not evidence from practice. Anecdotal evidence points to the existence of disputes between the Employer and foreign contractors, most of which have been determined or are currently pending before international arbitral bodies. There is a need for an exploration of practice to help fill the gaps in the literature.

4.5. Knowledge Gaps

At least four gaps in the literature have emerged from this review. Firstly, the existing literature relating to resolution of disputes between the State and foreign entities focuses on investment. Even so, the attention of the existing literature is generally on ICA (Cotran and Amissah, 1996). In spite of growing activity in infrastructure procurement, there is no empirical study on how infrastructure-related construction disputes are being resolved.

Secondly, the literature does not consider the impact of the peculiar features of the construction sector, parties involved, procurement strategies and the general context in which major construction transactions take place on disputes and their resolution. These issues remain unexplored.

Thirdly, there is little information, if at all, on pre-ICA efforts at resolution of construction disputes by parties or third party neutrals. Whilst one may look at the dispute clauses in the various conditions of contract for answers, these do not reflect practice. Further, the materials so far reviewed do not consider the viability and the role that alternative dispute resolution mechanisms, such as mediation currently play or can play in the resolution of such disputes. On the basis of the gaps identified in the literature and questions which they raised, the aim and objectives of the research were identified (see section 1.3). Chapter five identifies and examines the appropriate research methodology for the study.

4.6. Summary

In this chapter, the literature on infrastructure-related construction dispute resolution in developed and developing countries has been examined. Increasingly, many developed countries are resorting to ADR mechanisms to resolve infrastructure-related disputes. However, trends in developing countries show a continuing emphasis on the use of ICA. The literature demonstrates that many developing countries have issues with the use of ICA. These include concerns with costs and delays. But, limited information exists on how infrastructure-related construction disputes are resolved. Again, in spite of the apparent dissatisfaction with the extant dispute resolution system, there is no study examining the viability of ADR mechanisms or factors inhibiting their use. The next chapter identifies the appropriate research methodology for the study.

CHAPTER FIVE

CHAPTER FIVE - RESEARCH METHODOLOGY

5.1. Introduction

This chapter provides an overview of the research methodology. The study employed a qualitative research approach using case study as the strategy of enquiry. It relied on semi-structured interviews and documents as data sources. Borrowing from data analysis procedures and principles associated with grounded theory research, this study employed techniques such as coding, constant comparison, memoing and diagramming (hereafter referred to as grounded theory principles) as tools for data analysis. Data which were of a legal nature were analysed using doctrinal legal analysis. The qualitative data analysis software, NVivo was employed as an aid to data organisation, coding, theme generation, memoing and other aspects of the data analysis. Lincoln and Guba's (1985) criteria of trustworthiness was used to establish the credibility of the research findings. The chapter is divided into two parts. The first part (sections 5.2-5.6.2) examines the literature on research methodology with a focus on methodological choices for this study. It begins with a brief but critical outline of epistemological positions and research approaches. The second part (section 5.7) presents the research design. Details on strategies for data collection and analysis are provided. Finally, the evaluation criteria for the research are outlined.

5.2. Epistemological Position

The research process entails the use of techniques and procedures called methods (Crotty, 1998). These methods often sit within a framework, called methodology, which is anchored in epistemological and ontological positions (Crotty, 1998; Schwandt, 2007; Bryman, 2008). There are many epistemological positions, research methodologies and methods (see Figure 5a). Examination of each of these concepts is beyond the scope of this work. In this section, the focus shall be on the epistemological position for this study, namely interpretivism. To illuminate the rationale for the selection of this epistemological standpoint, interpretivism is

discussed alongside positivism, the philosophical perspective to which it emerged as a counter-perspective.

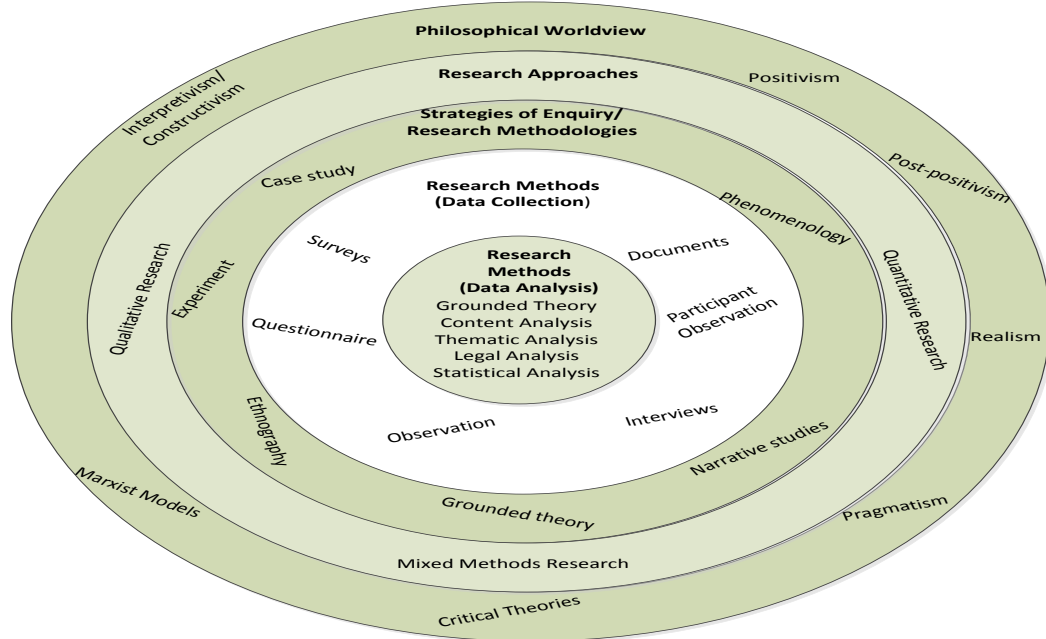


Figure 5.1: The Research Process Disc (Source: developed from Crotty, 1998; Denzin and Lincoln, 2005; Saunders *et al.*, 2007; Bryman, 2008 and Creswell, 2009).

5.2.1. Positivism

All research methodologies have an explicit or implicit theory of knowledge generation, that is to say, an epistemological position (Crotty, 1998; Bryman, 2008). Thus the positivist tradition roots its theory of knowledge in the natural sciences where reality is held to be relatively straightforward to access from observation and from a researcher stance of neutrality (Crotty, 1998; Neuman, 2003; Mottier, 2005; Bryman, 2008; Denzin and Lincoln, 2008). To the positivists, true knowledge is that which can be confirmed by the senses. They contend that there is a reality (an absolute truth of knowledge) out there to be studied and understood through observation, experiments and other scientific methods (Denzin and Lincoln, 2008). Neuman (2003) summed up the positivist researcher's approach to inquiry in the following words:

A positivist approach implies that a researcher begins with a general cause-effect relationship that he or she logically derives from possible causal law in general theory.

He or she logically links the abstract ideas of the relationship to precise measurement of the social world. The researcher remains detached, neutral and objective as he or she measures aspects of social life, examines evidence, and replicates the research of others. These processes lead to an empirical test of and confirmation for the laws of social life as outlined in a theory.

Positivism is often associated with quantitative research (Bryman, 2008).

5.2.2. Interpretivism

Aware of the difficulties of humans objectively studying humans, there was a shift in social science away from positivism towards a post-positivist stance that strives for objectivity but accepts the difficulty of achieving this fully. This shift marked a turn towards an acknowledgement that interpretation plays a key part in both data gathering and analysis. Indeed much qualitative research has come to be framed as interpretivist though it is important to see this paradigm as a very broad umbrella, containing diverse philosophical approaches.

Neuman (2003) defines interpretivism as relating to the study of socially meaningful human actions through direct detailed observation of people in their natural settings in order to arrive at understandings and interpretations of how people create and maintain their social worlds. Interpretivists hold the view that subjects of social science research (humans) are different to those of natural science and therefore require a different research approach that reflects their distinctiveness as against the natural order (Bryman, 2008). The goal of social research, for the interpretivist, therefore is to develop an understanding of social life and to discover how people construct meanings (Neuman, 2003). The task of the researcher is to uncover the processes and effects of such construction. His approach is inductive and aim at theory building rather than theory testing.

5.3. Research Approaches

As indicated in Figure 5a (above), there are different research approaches. The main approaches namely, qualitative and quantitative research, have developed as separate independent spheres of social research (Flick *et al.*, 2004). In suitable cases, these two

separate streams are combined to form a third sphere or research orientation called the mixed methods (Creswell, 2009). Some writers prefer to see these designs as existing on a continuum (Bryman, 2008). Admittedly, however, there are key philosophical differences between them.

The quantitative research approach is associated with the positivist philosophy of research. It focuses on the measurement and analysis of causal relationships between variables within a value-free research framework. Bryman (2008) isolates three key characteristics of quantitative research. Firstly, it adopts a deductive approach to research where emphasis is placed on theory testing and not theory formulation. On this point, Creswell (2009) adds that the aim of theory testing is accomplished by the researcher specifying narrow hypotheses and collecting data to refute or support it. Secondly, it incorporates the norms of positivism and natural science. Thirdly, it sees social reality as an external, objective reality. One of the known advantages of the quantitative method is its ability to measure the responses of large number of people to a limited set of questions, thereby facilitating comparison and statistical aggregation of data which result in generalizable findings (Patton, 2002). The very advantages of quantitative research enumerated above become its limitations once the object of study changes into a human being. As Black (1999, p.7) remarked, ‘human beings are notoriously uncooperative subjects’, and are difficult to subject to the controls associated with the positivists/quantitative approaches to research. To fully appreciate human interaction, a more subjective rather than the objective approach to research need to be considered.

The qualitative research paradigm traces its roots to anthropology, ethnography and American sociology (Kirk & Miller, 1986; Denzin & Lincoln, 2005; Platt, 1996; Vidich & Lyman, 2003) and has been increasingly used in social and behavioural research. The focus of qualitative research is to explore and understand what individuals or groups make of social phenomena or interactions in the context of the real world (Creswell, 2009). Qualitative

researchers appreciate that individuals develop subjective meanings of their experiences, and seek to explore these varied and complex situation (Denzin & Lincoln, 2005). Rossman and Rallis (2003) identify five key features of qualitative research namely: (a) it is naturalistic; (b) it relies on various methods which respect the humanity of the participants; (c) it is context-based; (d) it is emergent rather than pre-figured; and (e) fundamentally interpretive. Whiles quantitative research relies on deductive reasoning and focuses on theory verification, qualitative research inductively develop theories or patterns of meanings out of data collected from participants (Creswell, 2009). The qualitative researcher, unlike his quantitative colleagues, is not an objective outsider completely detached from the study using unbiased approaches (Rossman and Rallis, 2003).

The mixed method approach occupies the centre of the research design continuum employing methodologies from both quantitative and qualitative studies depending on suitability. Mixed method researchers see the boundary erected between qualitative and quantitative research by virtue of allegiance to and influences from philosophical worldviews as artificial and unhelpful (Bryman, 2008; Creswell, 2009). Combining the best of both worlds is therefore the focus of the mixed method approach.

5.4. Choice and Rationale for Epistemological Position and Research Approach

This study adopted an interpretivist philosophical stance and employed the qualitative research approach because these perspectives provided the best opportunity for the achievement of research objectives two to six (see section 1.3) namely:

- 1) identification and examination of features and context of the key parties involved in construction and civil engineering contracts relating to major infrastructure projects;
- 2) an investigation into aspects of the legal framework for infrastructure procurement relating to dispute resolution such as the contract formation process;

- 3) examination of the legal framework for resolving disputes arising out of major projects including the processes involved from the emergence of a dispute to its final determination;
- 4) identification of challenges to the existing modes of resolution including barriers to the use of methods other than litigation and international commercial arbitration; and
- 5) development of an explanatory framework and remedial strategies for the extant construction dispute resolution processes.

To achieve the aim and objectives of the study, in-depth information about parties, the settings within which they operated and the processes by which they resolved their disputes was needed. The qualitative approach was thus the most suitable for this kind of research (Denzin and Lincoln, 2005; Marshall and Rossman, 2006; Creswell, 2007; Creswell, 2009).

There were two other reasons accounting for the choice of an interpretivist perspective and a qualitative approach over other paradigms for this study. Firstly, to understand the complexities of the processes of dispute resolution among parties to major infrastructure projects, interpretivists' assumptions were to be preferred to positivists' postulations. This was because views of participants in major infrastructure procurement were crucial to the understanding of how parties resolved construction disputes and why the industry preferred one dispute resolution mechanism to another. Positivism, on the other hand, assumes that social phenomena are objective and external to the individuals who make up the society or a social group (Hammersley, 1993). This research was based on the assumption that dispute resolution was an integral part of the life of individuals. Their views were therefore relevant to our understanding of the process.

Secondly, there was lack of prior empirical research into the issues of interest namely the resolution of infrastructure-related construction disputes in developing countries. Thus, the study sought to explore this little understood issue. Hence, the inductive approach was

preferred to the deductive approach. Further, most of the major treatises on research design pointed to a qualitative research approach being the most appropriate for research with these types of features (see for example Berger and Luckmann, 1967; Hammersley, 1993; Guba and Lincoln, 1994; Denzin and Lincoln, 2005; Bryman, 2008; Creswell, 2009).

5.5. Research Methodologies

A methodology is a set of explicit rules and procedures for research on the basis of which knowledge claims are evaluated (Chava and David, 2000). The different research approaches are associated with different methodologies. For instance, quantitative researchers often employ methodologies such as experiments and surveys. The survey methodology (with its emphasis on the description of general trends based on numeric values) and experiment (with its focus on the testing of impacts of an intervention on an outcome) are predominantly suited to the positivist philosophy and the quantitative approach to research. Qualitative researchers also have at their disposal wide array of research methodologies (Denscombe, 2007). Using research methods as a basis of classification, Wolcott (1992) identifies over twenty different methodologies. Tesch (1990), on the other hand, identifies about twenty-seven different qualitative research types. Examples of qualitative methodologies include ethnography, phenomenology, grounded theory, the biographical method, narrative research and case study.

Ethnography, as a methodology, involve direct observation and participation of a researcher in small cultural settings with the aim to provide a detailed description of the culture from the perspective of insiders (Neuman and Kreuger, 2003; Bryman, 2008). Phenomenology, as a research methodology focuses on understanding the ‘lived experience’ of participants regarding a phenomenon through an in-depth and extensive engagement with participants (Denscombe, 2007; Creswell, 2009). Schwandt (2007) identifies narrative research and biographical method as a generic term for a number of methodologies that aim at the generation, analysis and presentation of data of an individual’s life history, life story, and

personal experiences. Variants of this methodology include biography, autobiography, life history and oral history (Creswell, 2007). Data, under this method, is often collected through interviews, personal letters diaries and journals (Bryman, 2008). Grounded theory is a research methodology developed by Glaser and Strauss (1967) which aims at the discovery and generation of theory from systematically obtained interview, documentary and observation data (Glaser and Strauss, 1967).

Case study is a methodology used to conduct in-depth investigations into a contemporary phenomenon in its natural or real-life context (Yin, 2009). It focuses on one or a few instances of a phenomenon in its natural context and provide in-depth account of relationships and processes occurring in that particular instance (Denscombe, 2007). As Stake (1995, pp.xv) puts it, case study *‘is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances’*. Denscombe (2007, p.54) identifies six key features of case study as a methodology. Firstly, it emphasises depth rather than breadth of study. Secondly, case study underscores the particular rather than the general. Thirdly, the methodology highlights relationships and processes rather than outcomes and end products. Further, it takes a holistic view of the phenomenon rather than concentrate on isolated factors. Again, it focuses on natural settings rather than artificial ones. Finally, case study utilises multiple sources of data collection and analysis rather than using just one research method. Although case study may provide bases for comparison of cases, its primary focus is to generate deep and rich understanding of a phenomenon.

Yin (2009) argues that in making a choice between case study and other social science methodologies, consideration should be given to factors such as the research questions and objectives of the study. If the enquiry is about some contemporary phenomenon, over which the researcher has little or no control and in-depth study is envisaged, then case study will be a good choice of strategy. The features of case study make it a suitable methodology for the

inductive study envisaged in this work. Yin (2009) also identifies two types of case study designs; the single-case and the multiple-case study designs. The single-case design may be holistic (constituting a single unit of analysis) or embedded (with multiple sub-units of analysis). An example of the former will be a study of a single organisation as an entity. If the study focuses on the organisation as a unit and various departments of the organisation as sub-units, such a study will be an example of the latter. The multiple-case design may also be holistic (with every case constituting a single unit of analysis) or embedded (with every case entailing sub-units of analysis).

Delineating the boundaries (both spatial and temporal) of a case is an important consideration in case study. Denscombe (2007, p.56) provides that a case needs to be fairly self-contained, with distinct boundaries. The boundaries of a case may be defined in terms of its physical borders or geographical context, individuals or groups relevant to the study of the case, the period the study covers and the activities of interest (Miles and Huberman, 1994).

Research methodologies serve as links between the philosophical worldview underpinning a study and the methods for the collection and analysis of data (Schwandt, 2007). Thus a choice of methodology determines the research methods, that is, the means by which data are collected and analysed.

5.6. Research Methods

For purpose of clarity, the research methods for data collection and analysis are examined separately.

5.6.1. Data Collection Methods

The quantitative research approach, with its associated methodologies such as experiments and survey, usually employ data collection methods such as self-administered questionnaires, internet-based questionnaires, reviewing of existing statistical data, interviews and structured observations (Black, 1999; Fink, 2002; Creswell, 2009). There are varied sources of data

common to most qualitative research methodologies. Creswell (2007) mentions four of these sources namely observations, documents, interviews and audio-visual materials. To this list, Yin (2009) adds physical artefacts. Two of the sources predominantly used across all qualitative methods namely interviews and documents are examined further.

Interviews provide the qualitative researcher the opportunity to obtain, through exchanges, in-depth, nuanced and diverse meanings of a phenomenon from the interviewee's experience. In their treatise on interview research, Gubrium and Holstein (2002) identify five different forms of interview. These include survey, qualitative and, in-depth interviewing. The others are life story and focus group interviewing. Not all these types of interviews are suitable for qualitative research. For instance, survey interviewing (which relies principally on sampling, standardised questions and interviewer's neutrality and objectivity) is usually useful in quantitative studies.

Qualitative interviewing, on the other hand is more interpretivist in its approach. Its emphasis is on understanding the meaning of the interviewee's experiences regarding the phenomenon under study (Gubrium and Holstein, 2002). It is open-ended in nature and focuses on the variety of meanings that emerge from conversation between the interviewer and the interviewee. The interviews may be in-depth (Gubrium and Holstein, 2002), focused (Yin, 2009) or semi-structured (Kvale, 1996).

Techniques for semi-structured or open-ended interviewing vary. Patton (1990) identifies three different approaches or techniques. These are the informal conversational interview, the general interview guide approach and the standardised open-ended interview. These approaches do not only differ in terms of the preparation required but also in terms of conceptualisation and instrumentation (Patton, 1990, p.280). In the case of conversational interviews, questions are generated as the interaction between the interviewer and the interviewee progresses. There are no pre-determined questions. The second interview

technique described by Patton (1990) is the standardised open-ended questions. With this approach, carefully worded set of questions pre-arranged in a particular order is administered to all interviewees in the same way. The advantage of this approach is that variation in questions asked is minimised.

The third interview technique is the general interview guide approach. Patton (1990, p.280) described this interview approach as entailing the following features:(i) outlining a set of issues to be explored prior to the interview;(ii) issues in the outline need not be dealt with in any particular order;(iii) actual wording of questions used to elicit responses about the issues need not be pre-determined; (iv) interview guide simply serve as a basic checklist to ensure that all relevant topics are covered; (v) the interviewer adapts both the wording and the sequencing of questions to specific interviewees in the context of the actual interview. The advantage of this interviewing technique is that it allows interviewers to cover relevant topics whilst at the same time offering the flexibility to probe and ask follow-on questions in relation to specific topics.

Documents, as an important source of data in qualitative research, may take several forms such as policy documents, published laws, parliamentary proceedings and law reports. These may be categorised into different classes depending on their nature and where they were retrieved. For instance, some documents may be of a legal nature such as statutes, regulations and case law. Others may be archival records, such as past project reports. Yet still, other documents may be contemporary internal documents of organisations such as memoranda and internal procedures. Creswell (2009) provides three advantages that documents possess. Firstly, they carry the language and words of the authors thoughtfully assembled. Secondly, they are unobtrusive source of information capable of being accessed and reviewed at any time. Finally, they save the researcher time for transcription. Though useful as data source, documents may sometimes be inherently biased. They may be prepared for specific events

and may not carry a complete picture of the phenomenon they address (Yin, 2009). There is also the challenge of accessibility of relevant documents due to confidentiality (Creswell, 2009).

5.6.2. Data Analysis

Distinct approaches to data analysis are employed by quantitative and qualitative researchers. Quantitative researchers rely heavily on statistical analysis using both descriptive and inferential statistical tests and tools. Quantitative data analysis, apart from its emphasis on breadth, aims at testing pre-determined hypotheses leading to a confirmation or a falsification and modification of theory. Data is thus, organised around pre-determined hypothesis.

In contrast, qualitative data analysis essentially involves taking the data apart, understanding the components and how they relate to each other (Stake, 1995). Miles and Huberman (1994, p56) summed up the idea of qualitative data analysis in the following words: ‘to review a set of field notes, transcribed or synthesised, and to dissect them meaningfully, while keeping the relations between the parts intact, is the stuff of analysis’. Creswell (2009, pp.184-190) argues that regardless of the type of qualitative methodology employed, a common process to qualitative data analysis involving six steps is discernible, though the steps may not necessarily be linear. These are as follows: (a) organisation and preparation of data for analysis (including transcribing interview data, typing field notes, scanning documents and other visual images) ; (b) reading through the data over and over again to get the general sense of the data; (c) coding (segregating data into chunks); (d) using the coding process to identify categories or themes and also to generate description; (e) contextualising and finding linkages between the themes to identify how they fit together in the narrative; and (f) interpretation-making meaning of the data.

Qualitative data analysis methods commonly employed by researchers using different qualitative research methodologies include thematic analysis and qualitative content analysis.

Bryman (2008, p.529) describe qualitative content analysis as entailing ‘searching-out of the underlying themes in the materials being analysed.’ In this sense, this method of data analysis can be distinguished from quantitative content analysis which places emphasis on word frequency count (Morgan, 1993; Stemler, 2001). Hsieh and Shannon (2005, p.1278) also define qualitative content analysis as ‘a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns’. The authors identify three approaches to qualitative content analysis namely conventional, directed and summative content analysis. With the conventional approach, categories of codes are derived from the text itself. The directed approach however relies on the theory undergirding the study for coding categories which are predetermined. The summative approach relies on counting and comparisons. Of the three approaches, the conventional approach suits the naturalistic research framework as it emphasises on the emergent nature of codes and categories.

The emphasis on the identification and development of themes rather than frequencies per se in qualitative content analysis means this data analysis method is similar to thematic analysis. In this regard, Bryman (2008) argues that thematic analysis is common to many other qualitative data analysis techniques such as narrative analysis, critical discourse analysis, and the use of grounded theory principles. To advance Bryman’s (2008) argument even further, a closer examination of the qualitative data analysis methods discussed above shows that generally, they all share common techniques and approaches to data analysis.

Nevertheless, Creswell (2009, p.184) acknowledges that in addition to the common qualitative data analysis methods there are specific data analysis procedures which are primarily associated with particular methodologies. For instance, Yin (2009) recommends five analytical techniques for case study analysis namely pattern-matching (comparing an empirically-based pattern with a predicted one with the aim of developing theoretically

significant explanation for the outcome), explanation building, time-series analysis, logic models and cross-case synthesis. Ethnographers employ thick description and theme development whilst phenomenologists focus on generating meaning from data.

Grounded theorists also have elaborate and systematic principles and tools for data analysis. These include coding, constant comparison, questioning, diagramming and memoing. Grounded theorists employ different types of coding. Glaser (1978) and Glaser and Holton (2004) identify three data coding phases namely open/substantive, selective and theoretical coding. Substantive coding refers to the process of conceptualizing data in the empirical state (Glaser and Holton, 2004). This is an intensive line-by-line coding which generates concepts closely related to the data. Theoretical coding refers to a 'second-order' coding which determines how the substantive codes may relate to each other (Glaser and Holton, 2004). Strauss and Corbin (1990, 1998) maintain an elaborate three-phased coding system namely open, axial and selective coding. Open coding is the researcher's first analytical engagement with the data which results in breaking down of data into chunks. Incidents, events/actions and interactions are compared with others for both similarities and differences. Conceptual labels are then assigned. Further, the dimensions and properties of these conceptual labels are explored.

In axial coding, a connection is made between categories and their sub-categories and the ensuing relationships are tested with data through the 'coding paradigm' of conditions, actions /interactions and consequences (Strauss and Corbin, 1998, p.128). The 'coding paradigm' is described by Strauss and Corbin (1998) as a process which helps in systematic analysis of the data so as to enhance integration between structure and process. The element of the paradigm called 'conditions' focuses on aspects of the data dealing with situations or circumstances in which a phenomenon under investigation is embedded. The 'actions/interactions' component of the coding paradigm is about the 'strategic or routine responses made by individuals or

groups to issues, problems, happenings, or events that arise under those conditions' (Strauss and Corbin, 1998, p.128). Consequences are simply outcomes of the actions and interactions. Thus, the idea behind axial coding is to re-assemble the data broken up during open coding in a more meaningful and logical way. With selective coding, all other categories are reconnected to a core category.

Constant comparison refers to that part of the analytical process where different pieces of data are compared for differences and similarities. Glaser and Holton (2004) identify three types of comparisons namely (a) incident to incident; (b) concepts to more incidents; and (c) concept to concepts. The aim of the first type is to generate concepts. The second type aims at achieving theoretical elaboration. Concept-to-concept comparison aims at integrating concepts into hypotheses which eventually culminate in the development of a theory. Corbin and Strauss (2008) refer to two types of comparisons namely incident to incident and theoretical comparison. The latter is a comparison at the level of properties and dimensions and helps the researcher to think in terms of abstracts.

As coding proceeds, thoughts, ideas, analysis and notes are captured in memos. Memoing is the means by which outcomes of the analysis at every stage of the process are recorded, tracked and developed as more information is introduced and data is coded and explored (Glaser and Strauss, 1967). Consequently, memo writing is required to commence at the onset of analysis (Corbin and Strauss, 2008) and may cover issues such as ideas developed during the coding process, concept development and elaboration, identification of categories and the relationship between them and integrating the emerging story from the process. Diagramming is also employed to generate visual representations to aid the process of data analysis.

5.7. Research Design

The objectives of this study (see section 1.3) informed the choice of the interpretivists' philosophical paradigm and the qualitative research approach for the study. Following on

from the above choices, case study was selected as the preferred methodology. One of the primary reasons for this choice was that case study focuses on in-depth investigation of a phenomenon of a contemporary nature in its natural setting; precisely what is required to meet the objectives of this study (Yin, 2009) (see section 5.6).

5.7.1. Case Design

A ‘case’ has been defined as the phenomenon under study; the unit of analysis (Denscombe, 2007; Yin, 2009). It may be an individual, an organisation, a group, an institution, a workplace, an industry, a programme, a policy, a city or a nation; it is a specific, complex, functioning thing (Bouma and Atkinson, 1995; Stake, 1995; Gerring, 2007). Ghana was selected as a holistic case in this study with data collected from the State and its agencies involved in major infrastructure project procurement and dispute resolution (hereafter referred to as ‘the Employer’) and foreign contractors. Hammel *et al.* (1993) highlights the need to distinguish the unit of analysis (the case) from the object of analysis (that is, the special subject which is the focus of the study). Such a distinction clarifies the essence of the case selection namely that it offers an ideal place for the study of the object of analysis. For this study, the object of analysis was infrastructure-related construction dispute resolution. Figure 5.2 below is a visual representation of the case.

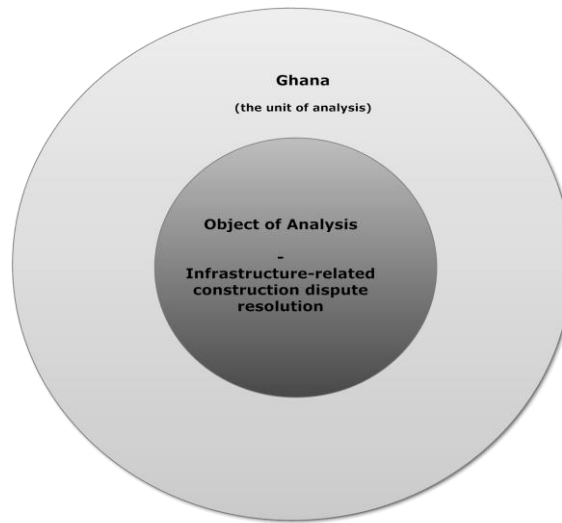


Figure 5.2: Case Description

Rationale for the choice of Ghana as the case, the population and issues about sampling are presented next.

5.7.1.1. Case Selection and Justification

Yin (2009) provides five justifications for a single case selection. All five reasons are based on case characteristics. These are criticality, uniqueness, representativeness (its typicality or exemplifying nature), the convergence of rarity and accessibility (revelatory case) and the duration of study (longitudinal case). The critical case is useful for theory-testing. It is termed a ‘critical case’ because of its ability to affirm or disprove a hypothesis, or offer some other alternative explanation to an existing theory. A revelatory case is the type which, on a rare occasion, becomes accessible for inquiry. It may relate to prevalent issues which had previously not been scientifically researched as a result of lack of accessibility (Yin, 2003). A case may be longitudinal where it is studied at different points in time. The extreme or unique case is one which is chosen for its exceptional nature. The unique case may be contrasted with the representative, typical or exemplifying case which reflects everyday occurrence and thus shares similar characteristics with several others. An in-depth study of such a case throws more light on several other cases (see Bryman, 2008). A case with any of

the features described above may be justifiably selected on the basis of its characteristics for a single-case research (see Miles and Huberman, 1994; Flyvbjerg ,2006; Creswell, 2007; Bryman, 2008; Yin, 2009). Other factors such as access, time, resources and expertise may also be taking into account when selecting a case (Stake, 1995; Seawright and Gerring, 2008). Flyvbjerg (2006) has argued that the justifications provided are not mutually exclusive. The selection of a case may be justified on the bases of its characteristics and also for pragmatic and logistical reasons (its accessibility or hospitability) (see also Stake, 1995).

Ghana was selected as the case for this study for three reasons namely (a) its typicality and exemplifying features as a developing country; (b) feasibility of in-depth investigation as a result of accessibility and hospitability of the case; and (c) prospects of tentative generalization (see Stake, 1995). These reasons are expanded further. Firstly, Ghana, a typical developing country of about 25 million people, is situated on the West Coast of Africa. Since 1992, the country has been a political oasis in a region noted for its political upheavals and has enjoyed steady and tranquil political life anchored in the rule of law. Ghana's economy, which has been largely dependent on agriculture (contributing above 50% of GDP over the years) and mining, has witnessed a remarkable change during the past decade. In 2010, the service industry grew by 6.1% and constituted 32.8% of GDP thereby displacing the agricultural sector (which constituted 32.4% of GDP) as the largest contributor to GDP. The industry sector including construction grew by 7% contributing about 25.7% to GDP for the year (Government of Ghana, 2010). Overall, the economy witnessed a total GDP growth of 5.9% in 2010. The World Bank's Global Economic Prospects report for June, 2011 projected increased inflow of investments into the service sector, with telecommunications and the construction industries remaining the major recipients. The Bank reported that, *'outside the oil sector Ghana's economy will still register strong growth, particularly in construction services as large infrastructure projects are carried out'* (World Bank, 2011b,p.123).

A number of factors mark Ghana as a typical developing country for purposes of this study. Firstly, the State and its agencies are at the forefront of procurement of major infrastructure projects (see section 2.3). Secondly, these projects are often delivered by international construction firms since domestic firms lack the requisite skill and resources. Thirdly, it relies heavily on foreign funding for infrastructure development. In this regard, Ghana shares a lot in common with other developing countries.

Further, a study of the dispute resolution processes in nearly 140 developing countries was not feasible in the context of this research. The choice of Ghana as a single case made an in-depth study possible. In effect, Ghana was an exemplifying case. Consequently, the outcome of the study holds potential for tentative generalization beyond Ghana. Finally, pragmatic and logistical reasons played a key role in the decision to select Ghana as a case. The Government of Ghana had been concerned with the cost of resolving disputes from international projects in recent times (Daily Graphic, 2012; Daily Graphic, 2013). Thus, it was envisaged that public officials would demonstrate eagerness to facilitate access to departments for data collection. Here, Stake's (1995) admonition on the selection of cases comes to mind, the researcher must consider accessibility and hospitability of the cases and the site.

5.7.1.2. Individuals and Groups relevant to the Study

Data for the study were collected from the Employer and foreign contractors. In respect of the Employer, three sets of entities were targeted. These were Government Ministries which regularly participated in major infrastructure projects and the resolution of related disputes and their respective implementing agencies (MOFEP, 1997; Government of Ghana, 2010), supporting Ministries (whose responsibilities extended to all other Ministries directly involved in infrastructure procurement) and public institutions which played various roles in infrastructure procurement but were not directly involved in the implementation process. The above institutions were targeted because of their respective roles in infrastructure procurement

and dispute resolution. Regarding foreign contractors, the focus was on international design and construction firms which were directly or indirectly involved (or had been previously involved) in the execution of major infrastructure projects and dispute resolution. Details of participating institutions and background of interviewees is presented under section 6.2 below.

5.7.1.3. Sampling Techniques for the Selection of Participants

Participants for the study were selected from the institutions identified under section 5.7.1.2. Experience with past or on-going major infrastructure projects, preferably one which had disputes or is currently experiencing disputes was a crucial criterion. The most appropriate sampling techniques under the circumstance were purposive or judgment sampling (see Dixon *et al.*, 1987; Seawright and Gerring, 2008), snowball sampling (see Creswell, 2007) and theoretical sampling (see Glaser and Strauss, 1967). The use of purposive sampling was relevant due to the need to select the most productive or knowledgeable personnel within each organisation who met the set criterion for the interviews (see Rubin and Rubin, 1995; Marshall, 1996). Secondly, apart from purposive sampling, snowballing sampling was also used. The rationale for this sampling strategy was that participants selected through purposive sampling volunteered information on other persons who met the set criterion for selection. Finally, as data emerged and initial analysis commenced, sample selection was driven more by what additional theoretical insights a particular interviewee could add to the emerging concepts (see Glaser and Strauss, 1967).

5.7.2. Negotiating Access: Vertical/ Top-down and Horizontal Access Strategies

Marshall and Rossman (2006) and Stake (1995) admonish researchers to pay attention to access issues, particularly gatekeepers. In this research, access to research sites was negotiated through introductory/request letters and face-to-face meetings. Each of the institutions of the interviewees was served an official request letter. The expectation was that these official

letters would be passed on to individuals whose line of duty related to the subject matter of the research, who would then be interviewed. In some cases, this happened. However, this ‘top-down access strategy’ was less successful. For many organisations, the letters appeared to have been lost in the bureaucracy of forwarding same through the organisation’s processes to the line officer. Another reason for the failure of this access strategy was that there was general reluctance to divulge confidential information on organisational practices.

The less than expected rate of success of the top-down strategy necessitated a rethink of the access strategy. Beyond the initial letters and contacts with the various institutions, it was observed that targeted organisations expedited access where an interviewee (who was an employee) within the organisations concerned introduced other colleagues who have experience in the subject area of the studies. Interviewees were therefore asked to identify other professionals with experience on the research subject within and outside their organisations. Three kinds of referrals were observed. These were as follows: (i) internal referrals - where one initial contact (an interviewee) within an organisation set off a chain of referrals within the same organisation;(ii) external referrals - where an interviewee in one organisation identified and introduced other potential participants from other organisations on the basis of the former’s knowledge of the latter’s experience with the subject matter of the research; and (iii) ‘signpost’ referrals - where individuals (who were not participants/interviewees themselves) familiar with person’s with expertise and experience in the subject matter of the research within targeted organisations facilitated contact with such potential interviewees.

In sum, whilst some interviewees were approached through their organisations, others were identified and informed unofficially of the request to conduct interviews with them as official permission was sought from their organisations. However, in all cases, interviews were conducted with interviewees only when there was a written or oral permission to do so.

5.7.3. *Data Collection*

Data for this research was collected through two main sources namely, semi-structured interviews and documents. Rationales for the choice of the two sources of data for this study included their potential to offer in-depth information about the process of dispute resolution, the phenomenon under study (see section 5.6.1).

5.7.3.1. *Semi-structured Interviews*

On the basis of the reviewed literature, the research objectives and the research approach, semi-structured interviewing was selected as one of the methods for data collection. Three other reasons accounted for this choice. Firstly, it allowed the data collection process to be approached with sensitising themes (Blumer, 1969). Apart from the starting question, detail questions were emergent and developed in the course of the process. Secondly, semi-structured interviews allowed for the introduction of new ideas and further development of concepts obtained from previous interviews (Denscombe, 2007). Thirdly, most well-crafted agreements on dispute resolution often have clauses on non-disclosure and confidentiality. The real hurdle was how to get into the world of participants in this field and to learn at first hand their experiences in the face of the issue of confidentiality. Qualitative semi-structured interview offered the most promising opportunity due to the flexibility it provided for follow on questions.

The conduct of the semi-structured interviews followed Patton's (1990) general interview guide technique (see section 5.6.1). The interview guide was organised into four sections each covering one of the following themes derived from the research objectives: (i) preliminary issues; (ii) the procurement process (choosing dispute resolution mechanisms; (iii) disputes and the resolution process; and (iv) the interviewee's experience with specific projects. The theme 'preliminary issues' focused on securing information on the background of the interviewees and the organisations within which they worked. The essence of the theme was

to obtain information to meet the second objective of this study on the features of the parties to major projects (see section 1.3).

The second theme, procurement, aimed at obtaining information on the dispute resolution systems that the parties put in place at the beginning of the construction contract. Information obtained on this theme was to help address the third research objective on legal framework for infrastructure procurement. Thus, questions asked revolved around the role of the interviewees' organisations in procurement and the contract formation process, the Conditions of Contract in use, negotiation of dispute clauses and the selection of dispute resolution mechanisms. The third theme, 'disputes and their resolution' was at the core of the data collection process. It aimed at obtaining information on disputes, their occurrence and how they were resolved by parties. This information was to help address the third and fourth objectives of this study. Under this theme questions relating to dispute resolution mechanisms in use, the procedure for dispute resolution, problems with the extant process of dispute resolution and how they could be remediated were explored. A copy of the interview guide is attached as Appendix A.

Access to organisations and interviewees were negotiated through request letters containing information on issues such as the aim and objectives of the research, why the organisation and or a particular interviewee was selected, the nature and likely duration of interviews and assurance of confidentiality and anonymity. Four separate request letters were written. The first was addressed to institutions affiliated to the Employer. The aim of this category of letters was to secure permission from the institutions concerned and access to interviewees. A copy of this category of letters is attached as Appendix B. The second request letter was addressed directly to interviewees with institutions affiliated to the Employer. The aim of this category of letters was to secure personal consent of individual interviewees and to secure appointments (see Appendix B1). The third category of request

letters were addressed to foreign construction firms (see Appendix B2) whilst the fourth set of request letters went to interviewees within these organisations.

All interviews conducted were face-to-face and lasted, on the average, an hour with the longest and the shortest lasting two and a half hours and fifteen minutes respectively. The focus was to cover all themes outlined in the interview guide. Questions did not always follow the order in which they appeared in the interview guide and the wording of questions was not rigidly followed. Questions were sometimes paraphrased and or amended depending on the context of the actual interviewing process. Follow on questions were asked to clarify previous answers and to tease out further information where necessary. On the average, four interviews were conducted each week for a period of fourteen weeks as illustrated in Figure 5.3 below. Additionally, a minimum of four hours were spent every week on transcription and editing. Copies of transcripts were fed into NVivo 9 and other back-up devices. Additionally, a log book kept for all interviews and observations which could not be audio-recorded and a personal diary used to track the data collection trajectory became additional back-ups.

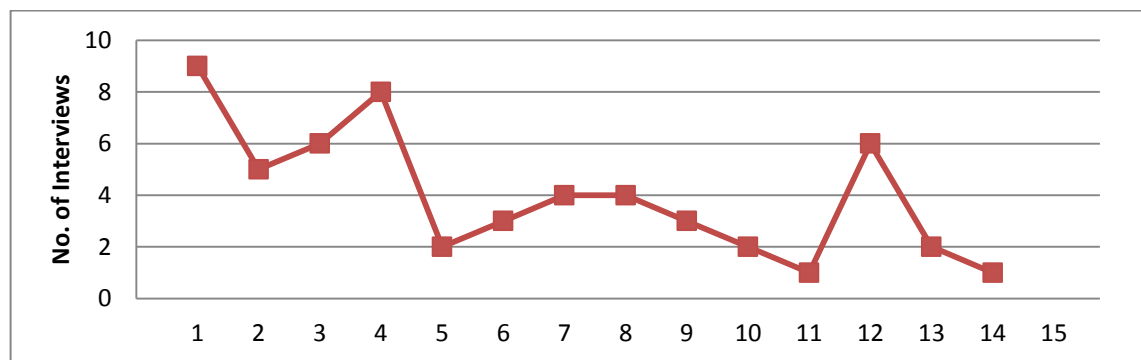


Figure 5.3: Number of Interviews per Week

5.7.3.2. *Pilot Study*

The opening five interviews were used as a pilot study to test the appropriateness of the questions. Pilot-testing the interview guide provided opportunity for questions which lacked clarity to be streamlined. It also provided a basis for the observation of the flow of questions and the need for rearrangement (see Bryman, 2008; Yin, 2009). After the five initial

interviews, the transcripts and informal observations made during the interviewing process were examined.

A number of issues were identified with the initial interview guide (Appendix A). Firstly, it was observed that interviewees' answers to questions under theme four (relating to their specific experiences with construction dispute resolution) invariably constituted a repetition of some of the answers previously provided under the first three themes. Interviewees often cited examples of projects they had been (or were currently) involved in the course of answering questions related to themes one, two and three and were often reluctant to deal with such issues again under the fourth theme. The first interviewee who went through all the themes and questions on the piloted interview guide was visibly tired and sounded clearly repetitive. Secondly, the inclusion of theme four made the interviews unduly lengthy. Where interviewees were made to address four themes, the interview duration exceeded the one hour timeframe indicated in the request letters. These observations were used to improve the final interview guide (see Appendix A1).

5.7.3.3. *Documents*

Data collection also entailed five hours of document retrieval time every week. Sources searched included libraries and court registries. The other major source of documentary information was the institutions of the interviewees. Due to the sensitive nature of documents relating to infrastructure projects and disputes, permission had to be sought from heads of organisations prior to obtaining copies. Consequently, three categories of documents were collected. The first were archival records. These included documents such as past project reports, contract documents, correspondence between parties regarding past claims and disputes. The second set of documents was contemporary documents on internal procedures of institutions and organisations involved in infrastructure procurement and dispute resolution. Examples of these documents included project appraisal reports, technical review

committee reports and proceedings on parliamentary hearings on arbitral awards against Ghana, some of which related to major infrastructure projects. The third set of documents collected were those of a legal nature such as published laws, regulations and judicial decisions. Other documents retrieved were policy documents and newspaper cuttings on discussions about cost of disputes in Ghana.

The issue of confidentiality restricted access to official statistics and other documentary information on disputes. Very little information was available in terms of descriptive statistics on the incidence and types of disputes from major projects. Similarly, there was no indication of the existence of databases on previous or current construction disputes, cost and time-frame for dispute resolution.

5.7.4. Sample Size

Fifty-six (56) interviewees participated in this research. This was within the limit of 60 proposed by Mason (2010) based on a review of the literature. After studying the sample sizes used in 560 PhD theses using qualitative approaches in the United Kingdom, Mason (2010) concluded that there was a mean sample size of 31. He however indicated that the number of respondents does not need to be above 60. The reason is that most studies often reach saturation after interviews with relatively small number of interviewees. The important point in qualitative research however is that samples size is not a critical issue; what is critical is whether saturation has been achieved (Glaser and Strauss, 1967). Corbin and Strauss (2008) define this point of saturation as ‘when no new data are emerging’.

What factors determined saturation then? Mason’s (2010) review of the literature points to several factors influencing how saturation is reached. The aim of the study (Charmaz, 2006), the scope of the study, the nature of the topic, research design and data collection methods (Morse, 2000) have all been cited as possible determinants of saturation. The decision as to when or what time saturation will be deemed to have been reached is a subjective one and

differ depending on the level of experience of each researcher (Charmaz, 2006, Corbin and Strauss, 2008). In this study, saturation was reached after 50 interviews were conducted. The six additional interviews conducted after the 50 repeated information already obtained.

5.7.5. Data Analysis

Most qualitative data analysis methods share common techniques (Creswell, 2009, pp.184-190) (see section 5.6.2). However, there are methodology-specific principles and procedures which are often blended into the general approach to qualitative data analysis (Creswell, 2009, p.184). Borrowing from qualitative data analysis procedures associated with grounded theory research, this study employed procedures such as coding, constant comparison, memoing and diagramming (hereafter referred to as grounded theory principles) as tools for data analysis (see chapter six). The additional input that the grounded theory approach brought to the data analysis process was the rigorous, systematic and explicit manner in which the tools and procedures were employed to code data, create categories and build relationships between the categories (Strauss and Corbin, 1998; Corbin and Strauss, 2008). The grounded theory principles also accorded with the tenets of the philosophy underpinning the study. The interpretivists' philosophical paradigm emphasises the experiences of participants and the meanings and interpretations of such experiences. The use of the grounded theory principles afforded the opportunity for these diverse experiences, meanings and interpretations of participants to be examined in a systematic way. Similarly, the method responded aptly to the inductive strategy of enquiry.

The documentary data of a legal nature such as legislations and judicial decisions were subjected to doctrinal legal analysis. Legal research has been broadly categorized into four classes namely, expository and theoretical research (both of which apply doctrinal legal analysis as a methodology) and law reform and fundamental research (both of which are interdisciplinary in character) (Arthurs, 1983; Pearce *et al.*, 1987; Chynoweth, 2008). The

doctrinal approach (sometimes called the ‘black letter’ approach) to legal research refers to the systematic exposition, analysis and evaluation of legal rules and doctrines. It is normative in character and focuses on the question, what is the law in a given situation (Chynoweth, 2008). It focuses on the identification and application of legal principles to specific facts (Adams and Brownsword, 2003). This type of legal analysis is, thus, based on the supposition that legal rules are internally coherent. Consequently, the approach depends on contents of formal legal materials and employs deductive, inductive and analogical reasoning and techniques of interpretation (Chynoweth, 2008; Cownie, 2004; Adams and Brownsword, 1999).

Meeting the second, third and fourth objectives of this study (dealing with the organisational structures of the parties to infrastructure projects and the legal framework for procurement and resolution of disputes) required identification, exploration and analysis of the relevant Ghanaian legislation and case law on the subject. This exercise was clearly within the domain of the doctrinal approach to legal analysis (Cownie, 2004; Adams and Brownsword, 1999). The approach was therefore employed to address relevant issues raised under the second and third research objectives alongside the grounded theory approach (see section 6.8). Figure 1.1 summarises the research design employed in this study.

5.8. Research Evaluation: Trustworthiness

Lincoln and Guba’s (1985) credibility, transferability, dependability and confirmability are used instead of internal validity, external validity, reliability and objectivity to establish the criteria for trustworthiness of the research. The rationale for this choice and details of the research evaluation process are presented in Chapter 9 on validation.

5.9. Summary

The aim and objectives of the research led to the choice of the interpretivist philosophical paradigm and the qualitative research approach for this study. The study used Ghana as a case

with data collected from the Employer and foreign contractors through interviews and documents. Sampling techniques utilised to select interviewees were the purposive, snowballing and theoretical sampling methods. Using semi-structured interviews and the interview guide technique advocated by Patton (1990), data was collected on three key themes derived from the research objectives, namely background of parties, the procurement process and the dispute resolution processes. The questions contained in an initial interview guide were piloted and the results obtained informed the preparation of a revised interview guide. Three different sets of documents were collected. These were archival records, internal documents of relevant institutions and documents of a legal nature such as statutes and judicial decisions. The data were analysed using grounded theory principles and doctrinal legal analysis. Chapter six reports the process of data analysis.

CHAPTER SIX

CHAPTER SIX - DATA ANALYSIS

6.1. Introduction

This chapter presents the procedure for data analysis. Borrowing from qualitative data analysis procedures and principles associated with grounded theory research, the study employed procedures such as coding, constant comparison, memoing and diagramming (hereafter referred to as grounded theory principles) to generate themes from the fifty-six interviews conducted and documents collected such as past project reports, project appraisal documents, sample contract documents and policy documents. Documents of legal nature such as legislation, judicial decisions were analysed using doctrinal legal analysis. Consequently, the discussion on how the data were analysed is in two parts. The first part focuses on the analysis with grounded theory principles and the second part examines how legal analysis was employed. The chapter provides a general overview of the data analysis strategy. This is followed by a detailed description of the analytic procedures. As a prelude to the presentation of the procedure, information on the background of interviewees is presented.

6.2. Background of Interviewees

A total of fifty-six interviews were conducted for this study. Forty-five out of the fifty-six interviewees were from Government Ministries, Departments and Agencies (MDAs) regularly involved in infrastructure procurement (see section 5.7.1.2). Table 6.1 below presents a list of MDAs concerned. The organisations of interviewees in the foreign contractors' category have been omitted for ethical reasons.

Table 6.1: Participating Ministries, Departments and Agencies with number of interviewees in brackets (Source: Field Data)

Ministries	Departments	Authorities/Statutory Entities	SOEs/Companies
Ministry of Roads and Highways (2)	Department of Urban Roads (2)	Ghana Highways Authority (6)	

Ministries	Departments	Authorities/Statutory Entities	SOEs/Companies
Ministry of Energy (1)		Volta River Authority (4)	Electricity Company of Ghana (2)
Ministry of Water Resources, Works and Housing (2)	Department of Hydrology (2)		Ghana Water Company Limited (4) & Architectural Engineering Services Limited (3)
Ministry of Finance and Economic Planning	Legal, Debt Management & Budget Departments (6)	Public Procurement Authority (2)	
Ministry of Justice & the Attorney-General	Civil Division (7)	Institution (name withheld) (1)	
Parliament	Finance Committee (1)		

The large number of interviewees from Employer organisations was unexpected as it was thought requirements of confidentiality associated with dispute resolution and government transactions would hinder access to information from employees of the State. Foreign contractors involved in major project execution in Ghana were rather unresponsive. Most of them were unwilling to allow their employees to participate in the research. Reasons for non-participation included lack of time, unavailability of key staff and failure to obtain permission from management (often outside the country). Another reason was the fear that providing information about their businesses will jeopardise their relationships with the State and its agencies. Consequently, as shown in Figure 6.1 below, only eleven out of the fifty-six interviewees were affiliated to foreign contractors.

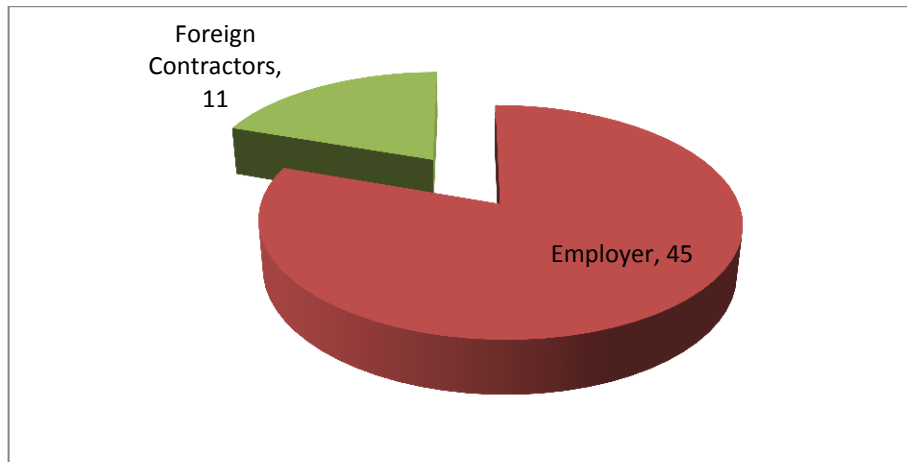


Figure 6.1: Interviews by Participants (Source: Field data)

In terms of professional spread, twenty-six out of the fifty-six interviewees were persons with legal background. This however does not imply homogeneity. The twenty-six individuals worked in diverse environments with different experiences in practice and training. Their involvement in major project acquisition spanned contract negotiations, project implementation, resolving disagreements at the early stages of disputes and participation in international arbitration. Interviewees with quantity surveying and diverse engineering backgrounds were nine and fifteen respectively. The rest of the interviewees had backgrounds in economics, finance and hydrology (see Figure 6.2 below).

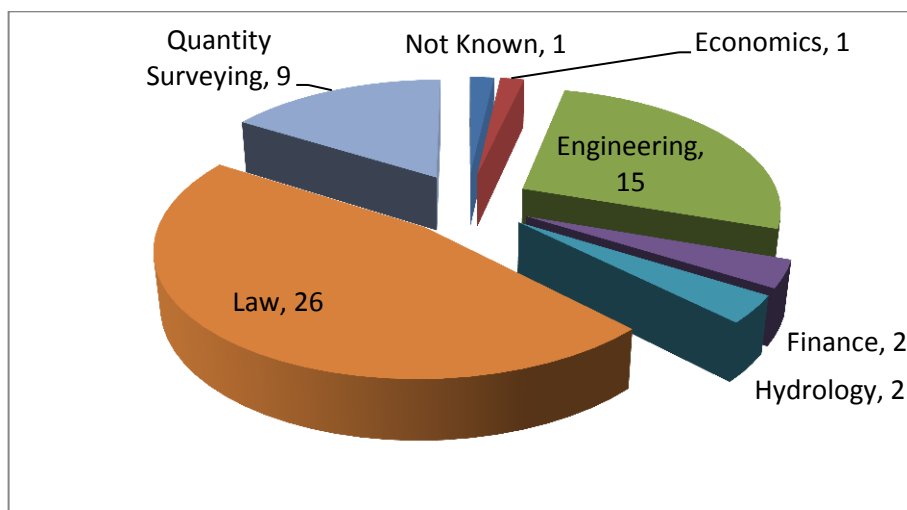


Figure 6.2: Professional Background of Participants (Source: Field data)

Interviewees in this research were the type Odendahl and Shaw (2002) and Marshall and Rossman (2006) referred to as elite participants. With varied professional backgrounds, the interviewees occupied management positions and were well-placed to have first-hand insights into practice within their organisations. On the other hand, their statuses made time an issue. Because they operated under demanding schedules, interview appointments were secured with some difficulty.

6.3. General Overview of the Data Analysis Strategy

The interviews conducted were transcribed, edited and imported into the qualitative data analysis tool, NVivo 9, together with the documents collected. Three types of coding were utilised to break up, re-assemble and integrate the data. These were open, axial (development of categories) and selective coding (data integration). With open coding, codes were freely generated on the basis of the research objectives. Overall, six hundred and twenty-one codes were created (see Appendix C). Using strategies such as Strauss and Corbin's (1998) coding paradigm, the codes generated were further re-organised into categories and sub-categories. In all, twenty-three categories and thirty-eight sub-categories were developed. After the re-organisation, four hundred and forty-six out of the six hundred and twenty-one codes were retained. The process of open coding and the development of categories were accompanied by memo writing and diagramming. Memos were used to explore codes and categories, to record thoughts about methodology and to capture the emerging story from the data analysis. Diagrams were also used to illustrate emerging linkages between ideas explored through the memos. Sub-categories and categories developed were integrated into themes. A total of five themes were finally generated. Details of the individual themes and their associated categories, sub-categories and codes have been attached as Appendix D. The five themes are 'Features and Context of Parties to Dispute Resolution', 'Procurement', 'the Dispute Resolution Processes', 'Consequences of the Extant Dispute Resolution Processes' and

‘Remedial Strategies’. The themes together with associated memos form the basis of the description and explanations called for by the research aim and objectives.

A detailed description of the analytic procedures using categories such as ‘claim events’ and ‘institutional structures’ and the themes ‘Features and Context of Parties to the dispute resolution processes’, ‘the Dispute Resolution Processes’ and ‘Remedial Strategies’ as illustrations is presented next.

6.4. Preparing the Data for Analysis

Fifty-two out of the fifty-six interviews were audio-recorded, transcribed and edited. Transcription and editing were carried out with the aim of ensuring that the integrity of the recordings was preserved in the transcripts. In some limited cases, sentences were reconstructed to ensure that grammatical errors were eliminated. Where there was an indication that changing a word or a sentence would affect the integrity of the information as provided by the interviewees, sentences were left unedited. As part of the editing process, the names of interviewees were anonymised. Each interviewee was assigned a specific code name. A list of the participants, their professional background and affiliation is attached as Appendix E. Attempts were also made to ensure that information, labels and descriptions which could be used to identify interviewees were anonymised.

The edited transcripts and the documentary data in electronic format were fed into NVivo 9 qualitative data analysis software and stored under the label ‘internals’. Internals in NVivo 9 are folders in which all sources of information imputed into the software for analysis are stored. Additionally, interviews which were handwritten were also transcribed, edited and inputted into NVivo 9. Documentary data which could not be fed directly into NVivo 9 due to format limitations were imported as ‘externals’ with links to the full text outside the software. ‘Externals’ is a folder in which links to documents outside the software including websites are stored. Preparation of data for analysis took place as and when interviews were conducted and

documents were collected. Further interaction with the data took place at the transcription and editing stages. After data had been fed into NVivo 9, additional time was dedicated to reading of transcripts and documents. This afforded the opportunity for an initial appreciation of the logic of the information in the transcripts prior to and during coding (see Creswell, 2009).

6.5. Coding

Before the discussion on how the coding process was carried out, a brief explanation is provided of terms used during the coding. A ‘code’ is the smallest unit into which data is divided in this analysis. It is referred to as a ‘node’ in NVivo 9. For the avoidance of doubt, a ‘code’ or ‘node’ in this study is not synonymous with a theme or a specific objective of the study. It represents isolated individual concepts which could be gleaned from the raw data provided. ‘Free nodes’ are codes which are generated on the basis of information communicated by small chunks of data within the wider scope of the research objectives. ‘Categories’ are broader ideas which unify or bring together individual concepts as captured by nodes. In the context of NVivo 9, the categories may be equated with ‘Tree nodes’. However, not all tree nodes were categories. Larger categories sometimes had sub-categories and these also appeared as ‘Tree nodes’.

In the context of this work, categories were further organised into ‘themes’. Each theme brought together all concepts, sub-categories and categories representing data which met specific research objectives. ‘Themes’ also appeared as tree nodes in NVivo 9. From the above description, it is apparent that whilst codes generated were many, the number of categories was relatively smaller. Similarly, the themes generated were smaller than the categories. Figure 6.3 below provides a visual summary of the scenario described above.

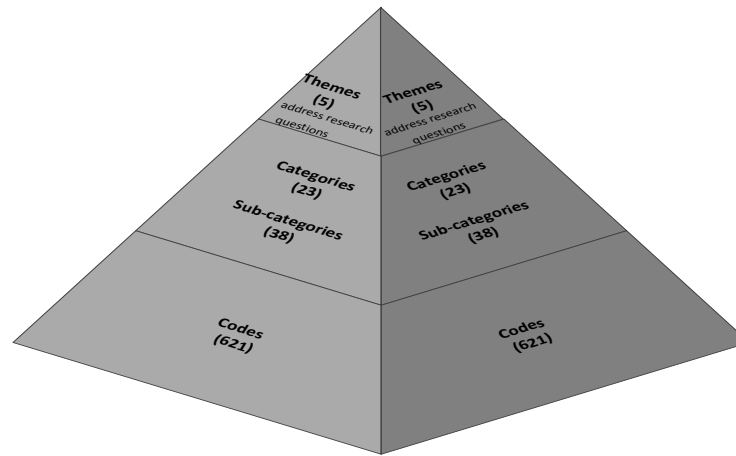


Figure 6.3: Coding Hierarchy

Three different strategies of coding were employed to achieve the coding hierarchy described above. These were open coding which involved the generation of free nodes from the interview data, axial coding which involved the re-assembling of the free nodes under more abstract concepts with wider explanatory power called categories and selective coding which entailed clustering categories around a core theme.

6.5.1. Open Coding

Edited transcripts were coded appropriately using combination of line-by-line, paragraph-by-paragraph and incident-by incident coding procedures. Codes were generated freely with an eye on the research objectives as reflected by the sensitising themes which had guided the data collection process. The sensitising themes were preliminary issues (background of interviewees and the organisations they worked for), the procurement process (contract formation and the selection of dispute resolution mechanisms) and disputes and their resolution (see Appendix A1). These themes became the reference points for the coding process and indeed the whole data analysis.

The decision to code an idea depended on its relevance to the research objectives. For instance, during the interviews, questions were asked about conditions giving rise to claims and disputes under the section titled ‘disputes and their resolution’. All through the open

coding, responses to this question from nineteen interviewees were identified and assigned labels. For instance, in response to this question CPR 4 stated as follows: *‘Some of the disputes we went into were because some people in authority somehow interfered with the running of the project so it gave grounds for contractors to make very successful claims’*. This statement was coded under the label ‘political interference’. CPA1 also referred to interference by politicians as a source of claims and disputes. Consequently, that response was also coded under ‘political interference’. Other interviewees provided information on different situations which led to claims and disputes. These pieces of information were assigned labels such as ‘change of scope of work’, ‘delayed payments’, ‘design changes’, ‘poor definition of scope of work’, and ‘site possession issues’. In like manner several hundreds of statements were assigned labels (coded). The open coding process yielded six hundred and twenty-one codes. A list of codes generated is attached as Appendix C.

The coding process was iterative. Consequently, some previously identified codes were merged or placed under common labels. For instance, in relation to the earlier example of questions about events giving rise to claims and disputes, both ‘site possession issues’, ‘relocation of utilities’ and ‘compensation payment issues’ were identified separately as events giving rise to claims. A closer scrutiny of each of the three codes subsequently showed that they all had the consequence of impeding timely possession of project sites leading to delays in work schedules. Consequently, all the codes were eventually merged into the code called ‘site possession issues’. In some cases new and more specific labels replaced earlier ones. For instance, initially, the codes ‘delays’ and ‘delayed payments’ were both placed under a common node called ‘delays’. However, reading through the statement of CPE 6 (where a distinction was made between delays in relation to payment and other types of delays), a decision was made to separate ‘delayed payments’ from other forms of delays. In

all, eighteen codes were generated from the responses to the question on factors leading to claims. Table 6.2 is a coding summary of the responses.

Table 6.2: Codes on question regarding claim events (Source: Field Data)

	Nodes
1	Poor definition of the scope.
2	Political interference
3	Site possession~ Access to site
4	Delayed payment
5	Delays
6	Ground conditions
7	Inadequate engineering studies on projects
8	Incomplete design issues
9	Effect of traditional procurement method
10	Inclement weather
11	Laxity in contract administration
12	Design changes
13	Extra work
14	Lack of coordination
15	Non-compliance with condition precedents
16	Poor preparation of contracts
17	Change of scope of work
18	Poor project preparation linked to cost

This approach to coding was used to generate all the other codes created in this study. The next stage after the open coding was re-assembling of the codes.

6.5.2. Development of Categories

Essentially, the open coding process broke up the data into smaller chunks. The six hundred and twenty-one individual codes carried bits and pieces of the larger story from the data as a whole. For instance, ‘delayed payments’ as an isolated concept provided very little insight into disputes and how they were resolved. Thus, re-assembling the broken up data into meaningful categories and themes was the next step after open coding. This process was also guided mainly by the research objectives. It was a gradual process involving the creation of sub-categories and categories (umbrella concepts for narrower concepts) and the clustering of the various categories generated around a core theme.

Returning to the earlier example of concepts such as ‘political interference’, ‘delayed payments’, ‘delays’, ‘changes in scope of work’ and ‘site possession issues’, there was the need to find a more abstract concept which was capable of representing these other concepts. ‘Claim events’ satisfied this requirement because it was a suitable rallying point for all codes which could constitute the basis of a claim. It reflected the likely consequence of those conditions, namely, claims. For instance, inability to deliver the project site on time to the contractor could and did lead to delays which resulted in claims. Similarly, design changes could and did lead to disruption of the schedules of contractors leading to claims. The same logic informed the rallying of other individual codes such as ‘using incomplete design’, ‘poor definition of scope’ and ‘laxity in contract administration’ around the category ‘claim events’. Table 6.3 below shows the category ‘claim events’ and its codes.

Table 6.3: The Category ‘claim events’ and its child nodes (Source: Field data).

Category	Codes	
Claim events	Poor definition of scope	Inclement weather
	Site possession issues	Laxity in contract administration
	Delayed payment	Design changes
	Political interference	Extra work
	Delays	Lack of coordination
	Unfavourable ground conditions	Non-compliance with condition precedents
	Inadequate engineering studies on projects	Poor preparation of contracts
	Incomplete design issues	Change of scope of work
	Effect of traditional procurement method	Poor project preparation linked to cost

In some cases, there were different bases for connecting different codes to a particular category. For instance, some codes captured state of affairs or existing conditions characterising a particular phenomenon. Others represented what actors involved with that phenomenon did or were doing in response to the existing conditions (functions). Yet still, other codes reflected the consequences of the actions of actors in relation to the phenomenon

in issue. For individual codes which were found to exhibit these features, Corbin and Strauss' (1990) coding paradigm of conditions, actions and interactions and consequences (see section 5.6.2) was used to re-assemble them under identified categories. Since the earlier example of 'claim events' did not exhibit these features, another category namely 'institutional structures' is used to illustrate this process of developing categories.

Reading through the interviews, all the information on interviewees' background were coded under the node 'interviewees' profile'. Similarly, information about interviewees' roles in their respective organisations was coded under 'interviewees' roles'. Information provided by interviewees about organisations they worked for such as the structure and objects of such organizations were also coded under two separate codes namely 'organisational structure' and 'objects of organisations' respectively. There was a need to identify a category under which all the four codes identified above will fit logically. The category, 'institutional structures' was adopted because it captured all information relating to the background description of interviewees and the institutions they represented. Thus, the four codes were linked to the category, 'institutional structures' (as illustrated by Figure 6.4 below) because they described the conditions or circumstances of the institutions.

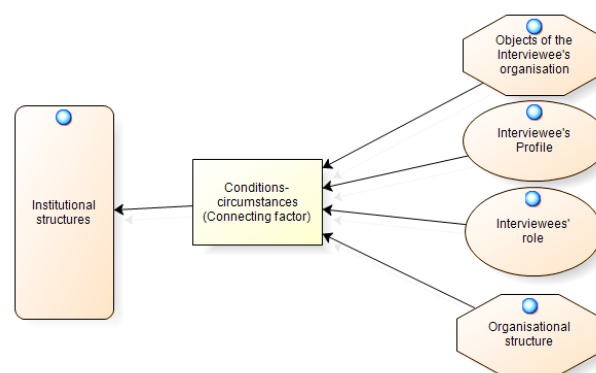


Figure 6.4: Link between 'Institutional structures' and child nodes (source: Field data)

Apart from the codes describing the structure and the condition of the interviewees and their respective organisations, there were others which were linked to the category named 'institutional structures' because they related to how the various organisations functioned as a

result of their respective structures and conditions. Yet still, other codes were linked to the category ‘institutional structures’ on the basis of the consequences of the actions of actors under the given conditions. Figure 6.5 is a model reflecting the different rationales for linking codes to the category ‘institutional structures’.

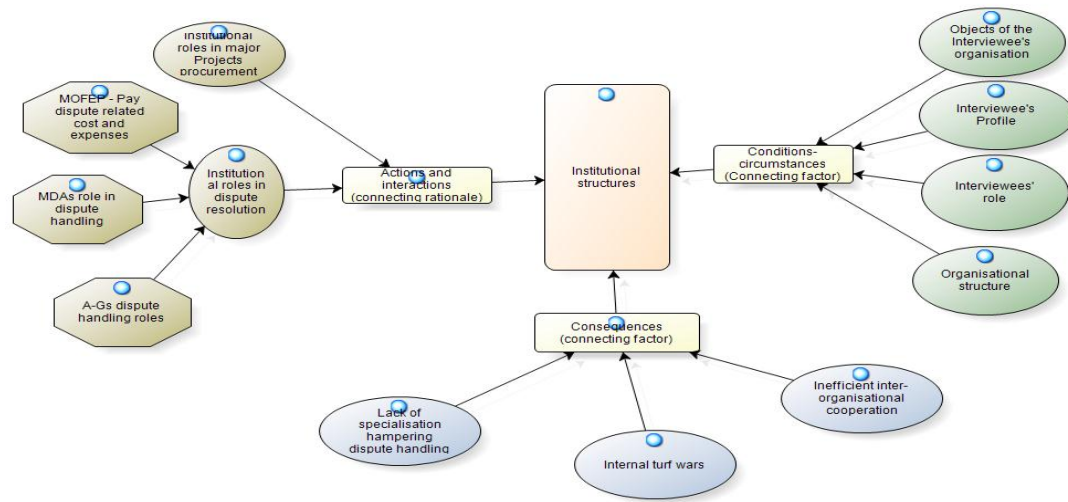


Figure 6.5: The category ‘institutional structures’ and its child nodes (Source: Field data).

Using the two re-assembling strategies described above, twenty-three categories were developed at various stages of the analysis. Table 6.4 below is a list of the categories.

Table 6.4: List of Categories

Categories			
1	Institutional structures	12	Required policy changes
2	Procurement	13	Education and training
3	Contract formation and review	14	Setting standards for ADR use
4	Selection of dispute mechanisms	15	Dispute avoidance and reduction
5	Claim events	16	Increased use of ADR mechanisms
6	Settling of claims	17	Political interference
7	Dispute causes	18	Funding major projects
8	Meaning of disputes	19	Barriers to ADRM use
9	Dispute resolution processes	20	Legal system
10	Dispute resolution procedures	21	Parties to major construction projects
11	Cultural influences	22	Consequences of the dispute resolution processes
		23	Front-end ordering

Code memos were written to explore the emerging stories from the various categories as part of the process of their development (see section 7 below).

6.5.3. *Integration (Clustering Categories around the Core theme)*

As both open coding and development of categories proceeded concurrently and iteratively, another stage of the analysis namely the integration phase was introduced. This entailed clustering the various categories generated around a core theme. Hence, there was a need to identify a core theme at this stage of the analysis. One of the twenty-three categories identified earlier namely, ‘the dispute resolution processes’ was selected as the core theme for the following reasons. As one of the sensitizing concepts which drove the data collection process, dispute resolution processes remained at the heart of the study. The aim of the study was to examine the dispute resolution experiences of parties involved in infrastructure projects in developing countries using Ghana as a case study. One of the research objectives was to develop an explanatory framework and remedial strategies for the extant construction dispute resolution processes (section 1.3). The questions in the interview guide essentially aimed at obtaining information regarding interviewees’ experiences with construction dispute resolution. Consequently, the category called ‘the dispute resolution processes’ was the convergent point for substantial portions of the data and thus was selected as the core theme. Under the core theme were sub-categories such as, ‘DRMs rarely used’, ‘DRMs regularly used’, ‘DRMs not in Agreement but in and in use ’and ‘Procedure’.

With the core theme identified, the next stage was the exploration of how the categories related to it. Again, Strauss and Corbin’s (1990) coding paradigm used previously to re-assemble codes was utilised in the clustering process with some modification. In addition to the core elements of the coding paradigm namely conditions (context/circumstances), actions and interactions (resulting from the existing conditions) and consequences (of the actions and interactions), a fourth element was added namely ‘remedial strategies’. The aim was to

capture categories on suggestions for improving the extant dispute resolution processes such as ‘required policy changes’, ‘dispute avoidance and reduction strategies’, ‘education and training’ and ‘setting standards for ADRM use’.

The various elements of the coding paradigm became the conduit for the exploration of links between the categories and the core theme. At this stage, more emphasis was placed on identifying categories which responded to the various research objectives. To achieve this, questioning, as an analytical tool, was employed. Apart from using questions to obtain data from the field, researchers employing grounded theory principles such as Strauss and Corbin (1998, p.90) also recommend that researchers use questions to ‘generate ideas or ways of looking at the data’. Consequently, questions which guided the analysis at this stage included the following:(i) which categories provided information on the conditions or the context within which the dispute resolution processes took place; (ii) which of the categories so identified provided information on the context of the Employer; (iii) which of the categories so identified provided information on the context of foreign contractors; (iv) which categories provided information on how actors within the Employer setup and the Contractor setup acted or interacted in response to the conditions or the context within which the dispute resolution processes took place; (v) which categories provided information on the process of dispute resolution and its associated procedures; (vi) which categories were about the consequences of the current dispute resolution processes;(vii) which categories contained suggestions for improvement of the current system?

The above questions aided the exploration of links between the core theme and the other categories. It was observed that each of the categories related to the core theme through one or more of the elements of the coding paradigm identified above. For instance, the category labelled ‘institutional structures’, examined earlier on, contained data on the organisational structures, objectives and functions of both the Employer and Foreign contractors. This

information provided insights into the nature of the parties involved in major infrastructure-related construction dispute resolution. The ‘institutional structures’ category also represented data which disclosed that the Employer was represented by different institutions namely, core infrastructure procuring MDAs, the A-Gs and MOFEP, among others. The data also showed that these organisations played different roles on behalf of the Employer. Whilst the MDAs had roles during the early stages of dispute resolution (e.g. negotiating with contractors), the A-Gs was the organisation responsible for conducting the right-based dispute resolution processes on behalf of the Employer. This information on multiplicity of organisations and functions associated with the Employer constituted part of the context or conditions within which dispute resolution took place. Thus, it addressed the second research objective (see section 1.3).

Other categories identified as providing information on the conditions or context within which dispute resolution took place included ‘political influences’, ‘funding major projects’ and ‘barriers to the use of Alternative Dispute Resolution’. Categories such as ‘funding major projects’, ‘procurement’ and ‘contract formation’ represented data on funding and procurement conditions, nominated Conditions of Contract and the use of prescribed dispute resolution mechanisms on contracts involving foreign contractors. These categories also captured aspects of the context within which disputes arose and were resolved. A theme called ‘Features and Context of parties to dispute resolution’ was created to bring together all the categories identified above as shown by Figure 6.6 below.

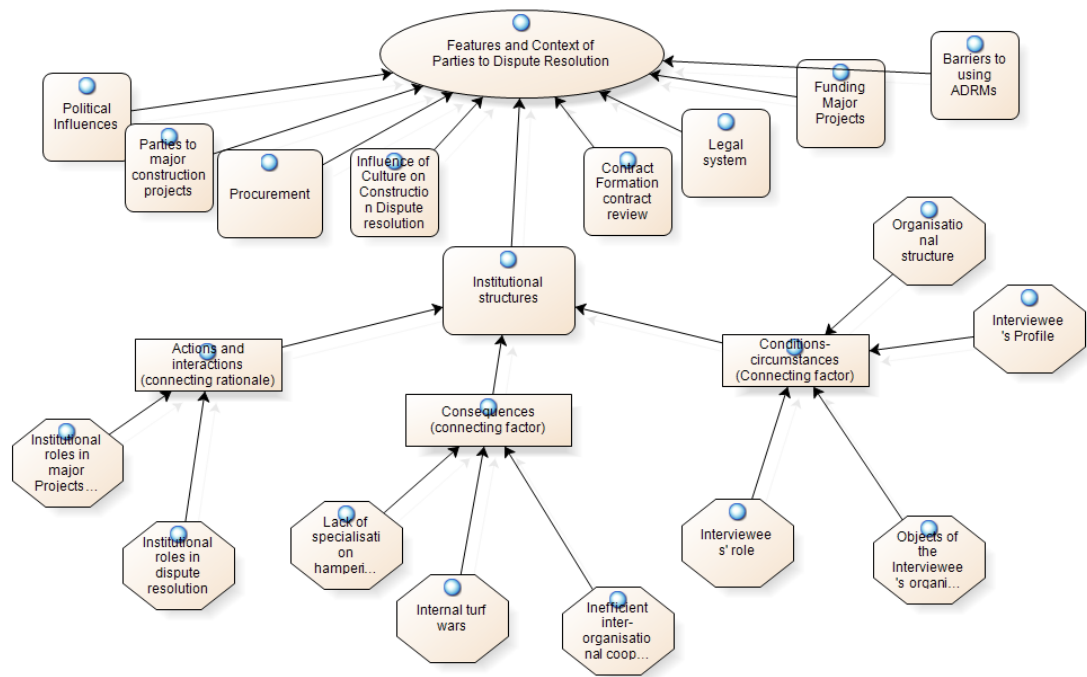


Figure 6.6: The theme ‘Features and Context of Parties to the dispute resolution processes’ associated categories and some linked codes (Source: Field data).

Categories such as ‘procurement’, ‘contract formation and review’, ‘claim condition and causes of disputes’ and ‘settling claims’ were classified under the ‘actions and interactions’ element of the coding paradigm. The reason was that, these categories reflected how actors involved in infrastructure projects designed their dispute resolution systems and engaged with pre-dispute resolution issues in response to the conditions within which they operated. The categories were placed under an umbrella theme called ‘Procurement’.

Categories which represented data on the outcome of the dispute resolution processes were captured under the third element of the coding paradigm namely ‘consequences’. Categories on suggestions for improving the dispute resolution processes such as ‘required policy changes’, ‘dispute avoidance and reduction strategies’, ‘education and training’ and ‘setting standards for ADRM use’ were classified under the theme, ‘remedial strategies’ as shown in Figure 6.7 below.

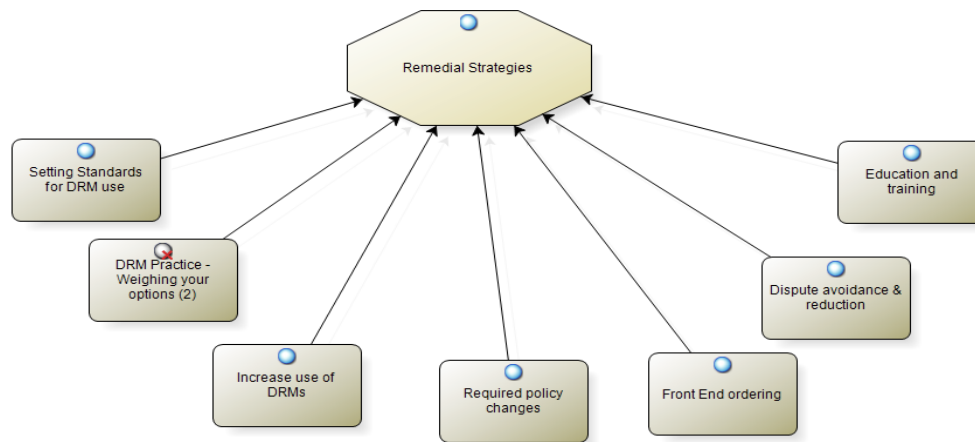


Figure 6.7: The theme ‘Remedial Strategies’ and its categories (Source: Field Data)

In sum, the categories developed during the re-assembling stage of the coding process were clustered around the core theme, ‘dispute resolution processes’ using Strauss and Corbin’s (1998) coding paradigm. The outcomes of the clustering process were five themes representing data on various concepts, sub-categories and categories as shown by Figure 6.8 below.

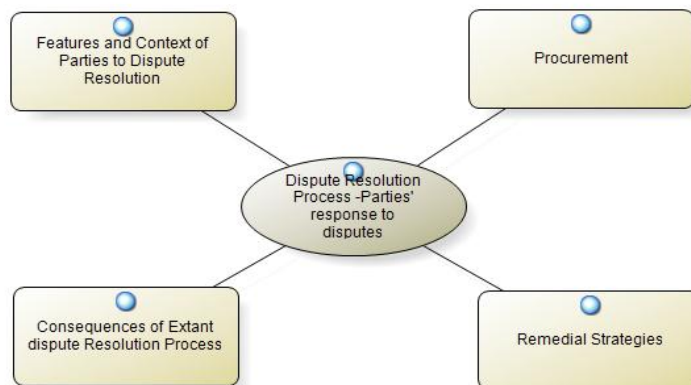


Figure 6.8: The five themes generated through the process of clustering (Source: Field data).

The results of the analysis based on grounded theory principles were supplemented by the outcome of the legal analysis as explained under section 6.8 below. Table 6.5 below illustrates how the themes generated during data analysis corresponded to the research objectives.

Table 6.5: Research Objectives and the corresponding themes and categories addressing them

No.	Research Objectives	Themes	Categories
1.	Objective two: Identification and examination of features and context of the key parties involved in construction and civil engineering contracts relating to major infrastructure projects	Features and Context of Parties to the dispute resolution processes	Employer Institutional structures Political influences Cultural Influences Legal system Funding major projects Barriers to the use of ADR Foreign Contractors Funding major projects Procurement Contract formation
2.	Objective three: Investigation into aspects of the legal framework for infrastructure procurement relating to dispute resolution such as the contract formation process	Procurement Legal Framework	Contract formation Claim events and causes of disputes Settling claims <i>NB: Response to this question is supplemented by material from the legal analysis.</i>
3.	Objective four: Examination of the legal framework for resolving disputes arising out of major projects including the processes involved from the emergence of a dispute to its final determination	Dispute resolution processes Consequences	DRMs DRMs rarely used DRMs regularly used DRMs not in Agreement but in use Procedure Consequences of the current dispute resolution process Cost Delays Destroying relationships Missed opportunities to benefit from intermediary ADR use The Artesian Well Scenario Lack of transparency
4.	Objective five: Identification of challenges to the existing modes of resolution including barriers to the use of methods other than litigation and international commercial arbitration	Barriers	Barriers to the use of ADR <i>(Employer-related, Client-related and Generic Barriers)</i>

No.	Research Objectives	Themes	Categories
5.	Objective six: Development of an explanatory framework and remedial strategies for the extant construction dispute resolution processes	Remedial strategies	Remedial strategies Required policy changes Dispute avoidance and reduction strategies Education and training Setting standards for ADR use etc.

6.6. Memo Writing

The coding process discussed above was an active cognitive process involving constant assessment of what the data being coded was communicating about the research objectives. It was more than merely labelling chunks of data and classifying them. It entailed making decisions about how the various pieces of information from the data connected together to provide credible responses to the research objectives. The process of memo writing was the means by which real time thoughts, ideas, notes and the logic of the analysis were captured. Memo writing provided an avenue for the emerging story from the analysis to be recorded, tracked and developed as more information was explored. This process commenced with the coding and continued throughout the process. Three different types of memos were written as the analysis progressed. These were code memos, methodological memos and theoretical memos.

6.6.1. Code Memos

Code memos captured thoughts about emerging concepts and categories. These thoughts were anchored in insights that interaction with the data provided. As the categories were identified and developed, code memos were created to record the emerging story from the data associated with them. The process aided the development of categories. A sample code memo written on the category called ‘Settling claim’ is attached as Appendix F.

6.6.2. Methodological and Theoretical Memos

Other types of memos written during the data analysis were methodological and theoretical memos. The methodological memos recorded thoughts about the process of data analysis

including the coding process. For instance, two methodological memos attached as Appendices G and G1 captured the trend of thoughts at different stages of the coding process. Appendix G captured the difficulties with line-by-line coding and suggested that it was impractical to use it in the circumstance. Appendix G1 recorded a qualification to the initial position on line-by-line coding contained in Appendix G. It provided reasons for a return to line-by-line coding in certain cases alongside paragraph-by-paragraph and incident-by-incident coding. The two methodological memos illustrate how memos were utilised during data analysis. The third form of memo used during the analysis was theoretical memos. These types of memos looked beyond categories to explore relationships between them. The memos and the ideas developed through them constituted the basis of the reports on the results of the data analysis.

6.7. Generation of Diagrams and Models

Diagrams and models in this study were used essentially to provide visual summaries and illustrations of ideas, structures and processes explained. Two sets of diagrams were used. One set was generated directly from NVivo 9 and the other set with other software. Regarding the first set of diagrams, NVivo 9 provides a tool which enables users to create models of information in existing NVivo projects. A number of models were created as visual representations of various sub-categories and categories using the model tool in NVivo. Figures 6.4, 6.5, 6.6, 6.7 and 6.8 above are examples of diagrams generated directly from NVivo. Some of the diagrams generated by this approach were used in the presentation of the results of the study.

The second set of diagrams produced in this study was generated with other software such as Microsoft Visio and SmartDraw using information from the data analysis. The diagrams were developed as part of the efforts to capture the emerging story the data was telling. They were particularly useful where processes and procedures were tracked. They constituted

supplements or visual expressions of the ideas which were captured through the process of Memo Writing. Here is an example of how they were developed. As both documentary and interview data on institutional structures were examined, it emerged that different organisations played different roles in infrastructure procurement and dispute resolution. Data explaining this phenomena were captured by codes which were subsequently linked to the category called ‘institutional structures’ as shown by Figure 6.5. Subsequently, a Code Memo exploring the emerging story from the category ‘institutional structures’ was written. From this code memo, the multiplicity of organisations and their functions in infrastructure procurement and dispute resolution were explored.

One of the processes which attracted multiple organisational involvements was that of contract review, a component of the procurement process. The emerging story captured in the Memo tracked the trajectory of the review process. Procurement (tendering, tender evaluation and selection of contractors) was the function of the MDAs directly responsible for the planning and implementation of projects. These MDAs were also responsible for contract negotiations with selected contractors in majority of cases. Once draft construction contracts were ready, the MDAs were under obligation to submit them to the Attorney-General’s Department (A-Gs) for review and approval (Article 88 of the Constitution). Some of the factors considered by the A-Gs during this process were project objectives, dispute resolution clauses, the legal capacities of the parties and the legal implications of the obligations of the Employer (see Table 7.1). Up to this stage of the process, all the institutions involved were part of the Executive arm of Government. Where transactions under review required parliamentary approval, the involvement of the legislature became inevitable and failure to do so resulted in void contracts (see section 7.3.2.4). Contracts approved by Parliament were referred back to the MDAs for implementation.

Having tracked the contract review process as described above through memo writing, a diagram (Figure 6.9 below) was created as a visual representation of the process.

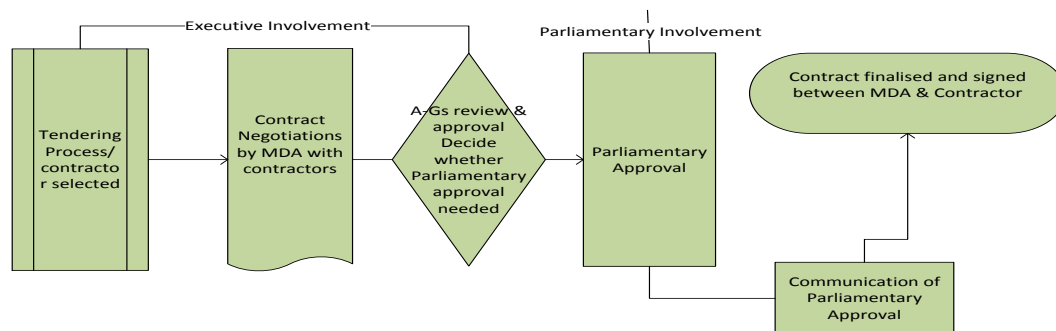


Figure 6.9: Contract Review Process –Embedded in the procurement process

The process of diagramming aided the analytical work by providing visual dimensions to the cognitive process thereby allowing whole process and procedures to be explained in simpler terms. Several of such diagrams generated during the analysis were used to supplement narratives throughout the reporting process. In some instances, codes in NVivo were extracted into tables. Again, the aim was to present ideas emerging from the analysis in a simple easy-to-follow manner. In sum, the diagrams utilised as illustrations and visual summaries in the presentation of results of the data analysis were generated either directly from NVivo or pursuant to the Memo writing process as described in this section.

6.8. Legal Analysis

Research objectives three and four required an examination of the institutional and legal frameworks for procurement of major projects and the resolution of disputes arising therefrom. Doctrinal legal analysis was employed to identify applicable constitutional provisions, legislation, regulations and judicial decisions (see section 5.7.5). The legal materials utilized in this research are outlined under the section on ‘List of Authorities’. Constitutional provisions such as Article 181(5) on the requirement for parliamentary approval for major infrastructure transactions between the State and foreign contractors were

explored to identify the confines of their application. Case law analysis, which constitutes an aspect of doctrinal legal research, was used to examine judicial decisions relevant to the research. For instance, to appreciate the true confines of Article 181(5), judicial decisions interpreting the constitutional provision such as the *A-G v. Faroe Atlantic* [2005-2006] SCGLR 271 were analysed.

The State and its agencies (the Employer) are legal entities. An examination of the relevant constitutional and statutory provisions establishing these entities was crucial to understanding the organisational structure of these entities as well as their functions. Consequently, laws establishing selected entities such as Government Ministries, implementing agencies and other relevant organs of State such as Parliament were examined to identify the source of the legal capacities of these institutions and their functions relative to infrastructure procurement and dispute resolution. Outputs from the analysis with grounded theory principles and the legal analysis corroborated each other. Details of the results of the analysis are reported in chapter seven.

6.9. Summary

Two data analysis strategies were employed in this study. Grounded theory principles were used to analyse both interview and documentary data. Legal analysis was employed to examine documents which were of legal nature. Generally, the qualitative data analysis with the procedures borrowed from grounded theory research was inductive. Data was broken down to smaller chunks and labelled as codes under the process of open coding. A total of six hundred and twenty-one codes were generated. The codes generated were further explored leading to the development of thirty-eight sub-categories and twenty-three categories. Subsequently, the categories and sub-categories were developed into five themes which addressed the research objectives. One of the five themes, 'the dispute resolution processes', was the core theme because it represented the central focus of the study. All the other themes

were explored for their connection to the central theme. The process of data analysis was accompanied by memo writing and diagraming. The latter provided a visual dimension to the analytical process whilst the former furnished the platform for emerging concepts and thoughts to be developed. In addition to providing fresh insights into the subject matter of the study, output from the legal analysis also corroborated the outcome of the analysis based on grounded theory principles. It is this analytical framework which underpins all the findings and representations contained in subsequent chapters of this study.

CHAPTER SEVEN

CHAPTER SEVEN – RESULTS OF DATA ANALYSIS

7.1. Introduction

This chapter presents the outcomes of the data analysis. The outcomes were organised into five themes namely, ‘Features and Context of Parties to Dispute Resolution’, ‘Procurement’, ‘the Dispute Resolution Processes’, ‘Consequences of the extant Dispute Resolution Processes’ and ‘Remedial Strategies’. The fourth and fifth themes are examined in chapter eight. Consequently, this chapter is divided into three main parts. The first part reports the results of the analysis on the features and context of the main parties involved in infrastructure procurement and dispute resolution in Ghana. The second part reports on the theme ‘Procurement’. It provides details of the outcome of the analysis on legal framework for infrastructure procurement and dispute resolution, and the impact of the procurement process on dispute resolution. The third and final part of the chapter deals with the theme ‘the Dispute Resolution Processes’ and presents the results of the analysis pertaining to infrastructure-related construction dispute resolution processes and procedures, and barriers to the use of ADR.

The analyses reported were based on semi-structured interviews and documents (see section 5.7.3). It emerged from the analysis that the nature of the Employer and foreign contractors, their activities and the context in which they operated influenced their dispute resolution choices and how infrastructure-related construction disputes were eventually resolved. Beginning with the Employer, the distinctive features of the two main parties to infrastructure-related construction disputes are examined together with the relevant contextual issues.

7.2. Features and Context of Parties to Infrastructure-related Construction Disputes

The main parties to major infrastructure contracts and disputes arising out of such transactions in Ghana were the State and its agencies (hereafter referred to as the Employer) and foreign contractors.

7.2.1. The Employer

Legally, Ghana as a State is considered as a single entity (see the 1992 Constitution, Articles 4(1) and 58(1)). When it enters into a contract, it does so as a single entity. However, behind the façade of the entity called the State was an elaborate bureaucracy underpinned by legal structures. The power of the various State entities to procure major infrastructure projects or participate in the process depended largely on their legal capacities. Section 14 of the Public Procurement Act, 2003 (Act 663) outlined public institutions whose procurement activities come within its purview. These were as follows:

- (a) central management agencies (CMAs);
- (b) Government ministries, departments and agencies (MDAs);
- (c) governance institutions (GIs);
- (d) sub-vented agencies;
- (e) state-owned enterprises utilising public funds (SOEs);
- (f) Public universities, schools and colleges;
- (g) Public health institutions;
- (h) Bank of Ghana and financial institutions wholly owned by the State or in which the State is a majority shareholder; and
- (i) Welfare institutions funded by the State.

Three entities constituted the CMAs. These were the Offices of the President, the Head of Civil service and the Public Services Commission. GIs were the regional coordinating councils, metropolitan, municipal and district assemblies (Act 663, s. 98). In practice, the

above list of institutions had become the basis for categorising procurement entities (see World Bank, 2003). These categories were not closed as the law empowered the Minister of Finance and Economic Planning to declare other entities or persons as procurement entities, in consultation with the Public Procurement Authority, by notice in the National Gazette (Act 663, s.16).

Each procurement entity was required by law to have a head, a tender committee and a tender review board. The tender committees were generally responsible for procurement activities of their respective entities. Under the First schedule to Act 663, their roles included reviewing procurement plans, confirming the range of acceptable costs of items to be procured, ensuring that procurement procedures were followed in strict conformity with the Act and facilitating contract administration. The tender committees worked with tender review boards whose main role was to review the activities related to specific procurement at each stage of the procurement cycle. The aim was to ensure compliance with the provisions of Act 663 and its enabling regulations. There were five different hierarchically arranged categories of tender review boards. At the base were the district tender review boards. These were followed by the regional tender review boards, the ministerial/headquarters tender review boards and the central tender review board (Act 663, s.20).

Each entity, tender committee and tender review board (except the central tender review board) was assigned a procurement value threshold (see Act 663, third schedule). By the current value thresholds, procurements of most major infrastructure projects were handled by the MDAs and the SOEs with the active involvement of other entities such as the Presidency and Parliament. Consequently, the examination of the Employer's structures for procurement of major infrastructure projects and dispute resolution focused on the legal capacities and roles of the Office of the President, the MDAs and the SOEs.

7.2.1.1. *The Office of the President*

States act primarily through their governments. Article 295 of the Constitution of Ghana (here after called the ‘1992 Constitution’) defines ‘government’ as any authority by which the executive power of Ghana is duly exercised. The 1992 Constitution establishes a Presidency (the 1992 Constitution, Article 57). By Article 58 thereof, the executive authority of the State was vested in the President who must exercise the said power in accordance with the provisions of the Constitution. The power to enter into agreements on behalf of the State was an aspect of executive power exercisable by the President (see the Constitution, Article 75). This power was exercised by the President in person or through his delegated representatives (see Article 58(3) & (4) of the 1992 Constitution). All executive acts were undertaken in the name of the President. Article 78(1) of the 1992 Constitution mandated the President to appoint Ministers of State to assist in the exercise of his executive powers. The Ministers so appointed were responsible for the sectors assigned to them. The President was assisted in the determination of general policy of government by a Cabinet (a group of Ministers).

Procurement of major infrastructure was policy driven. The initial discussions on the need for a major infrastructure project originated from the MDAs, but such an idea could only progress beyond the embryonic stage if it received Cabinet support (see the Constitution, Article 76(2)). Hensengerth’s (2011) work on the construction of the 400 megawatt capacity Bui Hydro-electric Dam confirmed the critical role the Presidency plays in major infrastructure procurement. The fact that the power to contract emanated from the highest echelons of power (which exercised some supervisory powers as well) underscored the chains of consultation and approvals often required at various stages of decision-making during infrastructure procurement.

7.2.1.2. *Government Ministries and Implementing Agencies*

Section 11 of the Civil Service Act, 1993 (PNDCL 327) provided that Ministries were the highest organisations for their respective sectors. Broadly, they were required to perform the following roles: (a) initiate and formulate policies taking into account the needs and aspirations of the people; (b) undertake development planning in consultation with the National Development Planning Commission; and (c) co-ordinate, monitor and evaluate the efficiency and effectiveness of the performance of an assigned sector (PNDCL 327, section 13). By virtue of the powers vested in the Ministries by PNDCL 327 and the executive authority delegated by the President under Article 58 of the 1992 Constitution, Ministers (heads of Ministries) were required to represent the State in the acquisition of major projects as Employers. It was on this basis that Ministries were often regarded as project owners. It was for the same reason that Ministers acted as signatories to major construction contracts. Section 20 of the State Property and Contracts Act, 1960 (C.A.6) provides that *'the Minister responsible for a subject or department, any other person authorised by the Minister, may execute a contract for and on behalf of the Republic on a matter falling within the Minister's portfolio'*.

Among the Ministries which successive Presidents had established under PNDCL 327 were five which stood out for their regular involvement in infrastructure procurement. These were the Ministries of Finance and Economic Planning (MOFEP), Energy (MoEN), Roads and Highways (MRH), Water Resources, Works and Housing (MWRWH) and the Attorney-General and Ministry of Justice (A-Gs) (Government of Ghana, 2009; MOFEP, 1997). The five Ministries listed above were divided into two on the basis of their roles. The MRH, MoEN and WRWH were referred to in this study as the core infrastructure Ministries. MOFEP and the A-Gs were called supporting Ministries because they provided specialised support services to the core infrastructure Ministries. The Ministries were constituted by

departments and divisions. Divisions provide administrative support to the Minister in the performance of his duties (PNDCL 327, section 12). Thus, they were responsible for general administration, planning, budgeting, co-ordination, and monitoring and evaluation of the activities of their respective Ministries. Apart from the divisions, each ministry had agencies, departments, authorities and SOEs (hereafter collectively called ‘implementing agencies’) who were responsible for the initiation, planning, implementation, monitoring and evaluation of infrastructure projects.

The components of the core ministries are briefly examined. The Ministry of Roads and Highways had three implementing agencies for road infrastructure namely the Ghana Highways Authority (GHA), the Department of Urban Roads (DUR) and the Department of Feeder Roads (DFR). The Ghana Highway Authority, established under the Ghana Highway Authority Act, 1997(Act 540), is a body corporate responsible for the administration, control, development and maintenance of trunk roads (see Act 540, ss. 2 and 43). The DUR and the DFR were responsible for urban and feeder road networks respectively.

The implementing agencies under the Ministry of Energy involved in infrastructure procurement were a mixture of corporate entities created directly by statute and companies wholly owned by the State. They included the Volta River Authority (VRA) (see the Volta River Development Act, 1961 (Act 46)) and the Bui Power Authority (see the Bui Power Authority Act, 2007 (Act 740)) involved mainly in electricity generation. The Ghana Grid Company Limited was responsible for power transmission. The Electricity Company of Ghana (ECG) and the Northern Electricity Department were in charge of power distribution. Other entities under the Energy Ministry were the Tema Oil Refinery and the Bulk Oil Storage and Transport Limited (involved in crude oil refinery, storage and transportation) and the Ghana National Petroleum Corporation responsible for the exploration and production of petroleum products. There were three main relevant agencies under Ministry of Water

Resources, Works and Housing. These were Ghana Water Company limited (GWCL), the Architectural Engineering Services Limited (AESL) and the Hydrology Department (Government of Ghana, 2011).

Each of the implementing agencies identified above constituted an enormous bureaucracy with departments, divisions and sub-divisions of their own and elaborate decision making structures. For instance, the Ghana Highways Authority had three departments, eighteen divisions and ten regional offices. The three departments were Development, Maintenance and Administration. The department responsible for development had seven divisions. These included Contract, Planning, Quantity Surveying and Materials Divisions. The rest were Survey and Design, Bridges and Road Safety and Environment Divisions (see Figure 7.1 below). Each division played a crucial part in the execution of major trunk road projects. Effective performance by GHA depended on the level of coordination and cooperation exhibited by its sub-units. Failures at the organisational level affected inter-organisational activities and the performance of the Employer as a unit (see section 7.2.1.3 below).

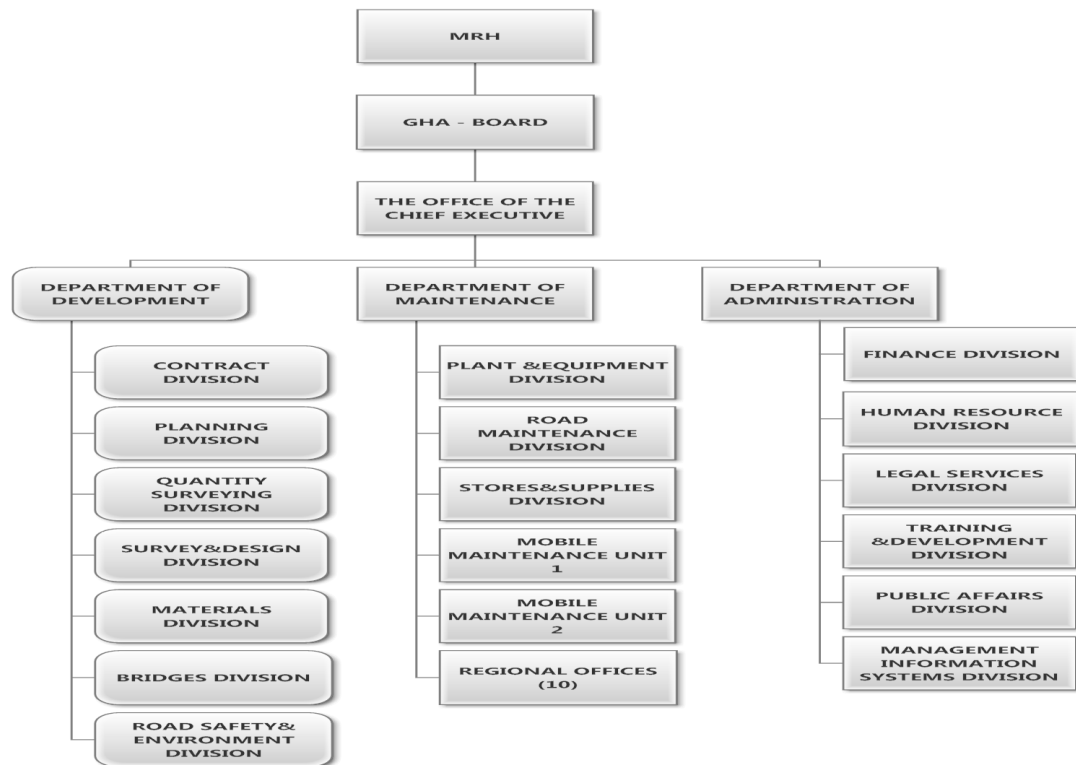


Figure 7.1: The Organogram of GHA (Source: Field data)

The two supporting Ministries, MOFEP and A-Gs, were also constituted by departments and divisions. Five agencies, departments and divisions played key roles in major infrastructure procurement within MOFEP. These included the Public Procurement Authority, the Controller and Accountant General's Department and the Budget division. The other two divisions were Debt Management and Legal Divisions. For the A-Gs, there was the Civil Division. The multiple organisational involvements in the acquisition of major projects meant decision-making entailed extensive consultation and approval processes which were often fraught with difficulties.

7.2.1.3. Multiple functions and Operational Inefficiencies

No single organisation had the power to perform all the roles of the Employer and this had implications for coordination, cooperation and decision-making. Roles were split among various organisations. The development of a policy framework for infrastructure acquisition was the responsibility of Cabinet, the sector Ministry and the National Development Planning

Commission (see the 1992 Constitution, Article 86, PNDCL 327, s.13). Commenting on the role of the Ministry of Roads, one interviewee noted as follows:

Preparation for all projects under the purview of the Ministry starts from here. We are in charge of policy and strategic planning. Need Assessment are done at the district, municipal and metropolitan levels and these are fed into the Ministry's programmes...Once a need is identified, the Ministry will have meetings with donors, have project appraisal documents (PAD) prepared and project objectives derived (CPR1).

Technical preparations for projects were the responsibility of the implementing agencies (see Act 540, s.3). Different pathways existed for the technical preparations depending on whether the project was internally or externally funded. The development of the initial project brief (project objectives, scope of project, Employer's business case etc.) remained the responsibility of the implementing agencies. Where a project was externally funded, the funding organisations and consulting firms appointed by the State also played a role in the technical preparation and implementation of such projects. A copy of the Project Appraisal Document for road project 'AkDA' prepared by a consultant appointed by the Employer, in collaboration with the GHA, disclosed that such technical preparations examined a number of issues. These included the project concept and rationale, scope and the strategic context of the project. Project objectives, its benefits and impacts, cost and sources of financing were also examined (OCWD, 2001).

Procurement was the responsibility of the Ministerial and Central tender committees and review boards (see section 7.2). The technical aspects of the procurement process were undertaken by the implementing agencies under the supervision of the sector ministry responsible. Describing the role of the implementing agencies in procurement, CPW5 stated as follows: *'Even though these projects are all Ghana Government projects we bring the technical eye of the Ministry...we lead in this procurement processes'*. Where external funding was used, various stages of the procurement process were regularly subjected to the approval of the funding organisation. For instance, the World Bank provided elaborate

procedures for staged review of procurement decisions of borrowers (see World Bank, 2011, Appendix 1, p. 38). These procedures were rigorously adhered to.

MOFEP had a statutory obligation to pay financial liabilities of the State (see the State Property and Contract Act, 1960, section 24). CPF1 commenting on the role of MOFEP in relation to infrastructure procurement observed as follows:

The ministry is also responsible principally for making all government's contractual payments and therefore it works with all the MDAs during the budget process to make provision for the payments of all their plans, programmes and activities within certain envelop. These payments will include necessarily payments arising from disputes which the government or any office or agency might find itself involved with (CPF1). Beyond paying government liabilities, MOFEP's roles also extended to the review and negotiation of loan agreements, seeking of Cabinet and parliamentary approval for funding arrangements and any tax waivers associated with the funded project. Financial arrangements for infrastructure procurement including payment for works was also a multi-organisational activity involving Cabinet, Parliament, the sector Ministries and agencies of MOFEP at various stages.

Contract review and negotiations also involved multiple organisations. These included the sector Ministries, the implementing agencies, the A-Gs and Parliament. Construction contracts were negotiated by the Ministries and implementing agencies responsible for the particular project. Draft contracts were reviewed and approved by the A-Gs and Parliament (see Articles 181(5) of the 1992 Constitution). A number of factors considered during the contract review process by the A-Gs were gathered from the data. Table 7.1 below itemises some of the issues explored during the review process at the A-Gs.

Table 7.1: Codes on Factors considered during contract review by the A-Gs

Standard Form Contract used	Project objectives
Changes to the general conditions	Dispute resolution clauses
Pricing	Legal capacities
Scope of Works or assignment	Elements of a valid contract
How Project implementation is reflected in contract	Guarding against impleading of Ghana before a foreign court

Due diligence on parties to transaction	Immunity provisions
Engaging experts on unclear provisions	Financial obligations
Value for money	Termination clauses
Legal implications of Employer obligations	Scrutiny of Contract for standard provisions

In the absence of guidelines on what attorneys should look out for during the review process, they did not have access to a comprehensive list of items which needed to be considered during the review process. Conspicuously missing from the list above was an assessment as to whether a transaction requires parliamentary approval. Equally intriguing was the inclusion of issues such as pricing and ensuring value for money. These outlined roles duplicated roles which MOFEP was performing.

The review process also focused on the selection of dispute resolution mechanisms. However, such review interventions did not result in any radical changes to standard dispute clauses in General Conditions of Contract used. Where the transaction in issue constituted an international business or economic transaction to which the Government of Ghana was a party, the transaction required parliamentary approval in order to be valid (see the Constitution, Article 181(5)). Failure to comply with the constitutional provision resulted in a void transaction (see section 7.3.2.4).

Supervision of the construction phase of projects was by the implementing agencies, acting as the Employer's Representative and the Engineer. As the Employer's representatives, their role was to ensure that the consultant or contractor delivered in accordance with the contract provisions. This role was played by the MDAs and in some cases, private consultants. Claim settlement and dispute resolution were the responsibilities of the Engineer, the implementing agencies, the sector Ministries, MOFEP and the A-Gs (see section 7.3.6). Figure 7.2 is a visual representation of some the interactions between institutions representing the Employer pertaining to activities prior to contract execution.

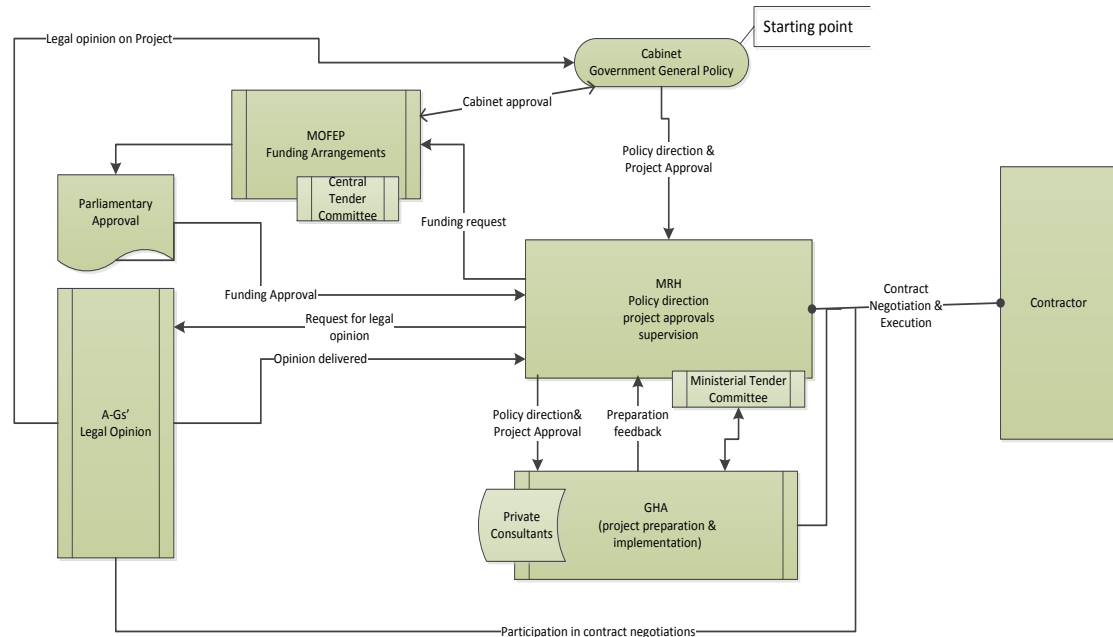


Figure 7.2: Web of Roles: Visual representation of interactions between sub-units of the Employer prior to contract execution (Source:Field data)

The non-linear nature of the functions of the various organisations involved in infrastructure procurement and dispute resolution and the inter-organisational relationships they engendered had implications for coordination and cooperation among the sub-units of the Employer. There was evidence of coordination problems between the A-Gs and the MDAs. CPA4 described the problem of lack of coordination and cooperation as ‘*running battles with all the MDAs*’. Elaborating further on what this means, CPA 4 stated that MDAs fail to cooperate with the A-Gs at the initial stages of projects. The A-Gs is consulted only when conflicts or disputes arise and the MDAs were unable to resolve them. In response to the ‘*running battles*’ argument, the MDAs argued that lack of capacity at the A-Gs hampered referral of transactions. CPR4, an interviewee from the road sector noted as follows:

The A-G’s office does not have the capacity to deal with all international contracts coming from all sectors. They don’t really have the time. So sometimes what happens is once our ministry gives the go-ahead, yes there is a lawyer in our ministry... a very good lawyer. So before we sign most of the documents, they are submitted to the ministry and she goes through it. What I know is that if there are certain things she has to refer to the AG’s Department, she does that. So in a way, the AG’s Department influences what we do. But I know it is not in all cases; it is only, may be, in the high profile cases that really [receive the attention of the A-G] (CPR4)

From the excerpt above, CPR4 raised two problems with the A-Gs namely, lack of time and lack of capacity. Commenting on the same issue, CPR8 observed as follows:

Within the Authority we have contract specialists and we have engineers who have worked with contracts so what we do is we have the Conditions of Contract which is a standard document which guides us and that is the FIDIC Conditions of Contract. We fashion our contracts with the FIDIC Conditions of Contract and once we are within the ambit of the FIDIC conditions we do not go to the extent of involving other people from other agencies like the AGs department to guide us on what we should put in the contract.

The above extracts from the interviews conducted exposed some of the difficulties with inter-organisational relationships among the various sub-units of the Employer involved in the execution of projects.

The problem of lack of cooperation extended to dispute resolution. Five out of the seven interviewees from the A-Gs had concerns with the stage at which disputes were referred to the A-Gs by MDAs. To them, disputes were often referred to the A-Gs when they were '*spoilt*' or '*when it is too late*'. In the words of CPA 1,

They will bring it [dispute] to us when the thing is spoilt. Disputes come to us when it is too late to do anything about it. They sue them then they quickly come, 'AG, what do we do? That is standard. The lawyer is the last person to be called...When the dispute is ripe then they come to us and say this people have taken us to arbitration. Ours is just to put it together.

However, it appeared that comments on late referral of disputes to the A-Gs do not take into consideration the MDAs' responsibility in the dispute resolution processes. Much of the initial attempts at resolving differences between the Employer and the contractor took place at the level of the implementing agencies with the technical experts and sometimes the sector ministry responsible. As noted by CPR8, because some of the issues were very technical and the AGs department did not have the technical expertise, they invariably depended on engineers from the MDAs. The issue of lack of coordination and cooperation was not limited to activities pertaining to procurement of projects and dispute referrals but also information sharing. The data as described above reveals a picture of an Employer with complex

operational structures characterised by ineffective inter-organisational cooperation and coordination.

7.2.2. Relevant Contextual Issues

Beyond the inter-organisational issues discussed above, the Employer's ability to prepare and participate effectively in dispute resolution was negatively affected by the context within which it operated. Key contextual issues identified which influenced the process of infrastructure procurement and dispute resolution included human resource deficiencies, political interference and fear of becoming blacklisted by the Employer. The upshots of these contextual issues extended to foreign contractors as well.

7.2.2.1. Human Resource Concerns and Lack of Specialisation

Article 88 of the Constitution makes the Attorney-General a Minister of State and the principal legal advisor to the government. He is responsible for the institution and the conduct of all civil cases involving the State. He is assisted in the performance of this role by the A-Gs. Thus, the roles of the A-Gs in the acquisition of major infrastructure projects can be categorised into four parts namely provision of legal advice (the Constitution, Article 88 (1)), contract negotiation and review (see C.A.6, section 22 and 25), approval of transactions through the rendering of legal opinions and resolution of all disputes which were likely to arise from the process of acquisition. The A-Gs' involvement in the resolution of infrastructure-related construction disputes entailed both front-end preparations and back-end readiness for future disputes. However, there was evidence that the A-Gs had serious human resource problems which affected both front-end preparations and back-end readiness. Two codes created from exact phrases used by two interviewees from the A-Gs captured how these problems manifested in practice. These are 'jacks of all trades' and 'fire-fighting'.

The code 'jack of all trades' was used in relation to the Civil Division which was the section of the A-Gs directly involved in infrastructure procurement. Commenting on what

pertained at the A-Gs regarding the performance of its roles in the acquisition of major infrastructure projects and the resolution of disputes arising out of such transactions, CPA5 stated as follows:

We are jacks of all trades. Myself, today I am doing this, tomorrow, I am doing that. I don't focus on one thing. I am all over the place. As I speak to you, next week I will be working on e-record keeping. Last week, I was working with the judiciary on ADR. The week before, I was doing something else. I have done work on migration. I have done work on our land and sea boundaries. So it is not... You see, as a human being under normal circumstances, you should have an area of specialization, so that you can excel in that area. But in our department here, it is one big cooking pot; we all do it (CPA 5).

The imagery of '*a big cooking pot*' used by the interviewee, in the Ghanaian context, conjures in the mind's eye a big black pot, always on fire, used to cook every foreseeable dish; it connotes lack of specialisation and excessive workload. The advice, review, approval and resolution functions of the A-Gs were undertaken by a small number of lawyers involved in all kinds of civil matters affecting government business. The lawyers were divided into loosely organised working groups with each group headed by a Chief State Attorney. The Attorneys within the working groups were periodically assigned transactions from various MDAs. There was no indication that individual attorneys were assigned a group on the basis of speciality. Again, the categories of transactions handled by the groups were fluid. The working groups encountered administrative difficulties and were also hampered by excessive workload and internal turf wars. It was to this little resourced division of the A-Gs that disputes arising from all MDAs were referred. Inadequate human resources and lack of specialisation resulted in inefficiencies in the execution of the A-Gs' roles. This in turn influenced negatively the ability of the Employer as an entity to perform its roles under construction contracts.

The second of the two codes describing the role of the A-Gs in infrastructure procurement and dispute resolution is 'firefighting'. The A-Gs was regularly hard pressed for a number of reasons namely, work load, human resource problems and lack of cooperation from MDAs

leading to delayed referral of disputes. Thus, its approach to addressing disputes was often ad hoc. As a result, lawyers who were already under a lot of pressure, had to engage in ‘firefighting’. CPA3 described the situation in the following terms:

You see, the AGs office is always hard pressed. That is what people don’t seem to realize and ... [a former Attorney-General] put it as [referred to it as] ‘firefighting’, we are always fighting to quench the problem because by the time it gets to the AGs’ office it may be even bad. You know the problems there, shortage of staff and so on, morale and incentive issues. And so you realize that you are working under some pressure to get things done.

The human resource difficulties identified in the excerpt above and the resultant approach to dispute resolution had consequences for the outcome of arbitrations against the State.

7.2.2.2. *Political Interference and Corruption*

Procurement of major infrastructure is a governmental responsibility (see section 2.3). Thus, it is impossible to conceive an acquisition process totally devoid of the influences of political actors. The very system of governance in place in Ghana made it imperative for every government to pay close attention to infrastructure development and sometimes bring its influence to bear on the process. On this issue, CPR4 observed as follows:

It is a fact we must face. In a democracy every government has to show what it has done at election time. So if perhaps promises have been made, ‘look we will complete this road in our first term’, definitely something should be done. So, if even there are drawings and they are not up to scratch, we can start something with it. Sometimes we have to go in and start hoping that we will be doing the design ahead of time but once you do that, you have already laid the grounds for claims and disputes (CPR4).

In their quest to achieve their political objectives, politicians interfered with the acquisition and dispute resolution processes beyond the limits allowed by law. More than ten interviewees from the MDAs interviewed independently intimated that politicians with vested interests in projects sometimes attempted to influence the procurement process. The views of two of the interviewees - CPR4 and CPW3- were particularly revealing. CPR 4, for instance, stated as follows:

When it is GOG sometimes what happens is that – yes, I mean it is obvious. People in high places may be interested in certain contractors getting the job. So sometimes what we do is to do ‘restricted tendering’. I wouldn’t say there is much interference because I was on a panel where – yes from all indications, what we had done there

was no way we could change it. All sorts of pressures were brought on us but we stood our ground and it was accepted.

CPW3 also noted in respect of corruption in the procurement process as follows:

I must say that unfortunately, sometimes because of the political ... [interviewee hesitates]. Let me just be frank with you, most of the contracts, there are people behind them, most of the contracts, there are politicians behind them, so they will push these things to be done. They will not come and push me but they will push my MD, then he will also try to push me, you see so in some of the cases, I don't even agree and in those cases, I have to write officially, I have to write officially that I think this and that should be done before the contract is signed. So what it means is that I shift the burden back to him [the MD]. Because of that we may not have a perfect contract. These are contracts you don't terminate easily. Those things [hasty contract agreements] will come and haunt you one day... Because of our experience we know those areas where disputes can arise but there is somebody who is also pushing you to get these things done (CPW3).

From the data on the category 'political interference', a number of issues were identified.

Some politicians used the infrastructure acquisition process for personal gain. Consequently, persons responsible for project implementation were sometimes 'coerced' to enter into contracts without the necessary due diligence. The consequence of such acts was the signing of flawed contracts. There was evidence that running contracts were often terminated or breached in certain cases without regard to contractual terms.

The issue of political interference also extended to the process of dispute resolution. For instance, CPE5 shared that there were instances where foreign contractors resorted to politicians when contract disputes arose. Here is an excerpt of the interview:

Q: When the engineer failed or was unable to settle, what happened?

A: The contractor by-passed us and went to the Castle.

Q: He went straight to the Castle?

A: He by-passed all the procedures and went straight to the castle. He went to report us. He ignored everything and went to the castle. But we brought him to book and settled.

'Castle' was a reference to the seat of government. Although, by virtue of their positions as officers of the government they were not neutral parties, it was a common practice for political actors to organise meetings between MDAs directly involved in projects and contractors to attempt to resolve disputes. In the case of one particular institution, it was indicated that as a result of this practice, no formal dispute had been recorded for nearly a

decade and a half. However, there were indications that sometimes subordinates were instructed to resolve disputes in a particular way. The implications of political interference on the dispute resolution processes are further examined in chapter eight (section 8.3.3.4.3).

7.2.2.3. *Fear of Blacklist*

As the major employer of infrastructure projects, the Employer was perceived as invincible when it came to the award of construction contracts. Contractors depended largely on government contracts for survival. Consequently, the Employer had several options and could therefore afford to reject, ignore or exclude contractors who were claim conscious or litigious. A World Bank study in 2003 found that very few contractors pursued disputes against the Employer due to fear that they will be blacklisted or side-lined (World Bank, 2003). Most interviewees considered the fear of being blacklisted as widespread. It affected both local and foreign contractors. It was therefore not surprising that a number of foreign contractors contacted refused to participate in this study (see section 6.3). Three interviewees from three different MDAs confirmed the existence of this fear. Dispute resolution destroyed relationships and it was expensive, they claimed. Blacklisting contractors who pursued disputes against the State was a natural outcome of the process. One of them opined as follows:

It [dispute resolution] destroys relationships because if you take me to arbitration and there is another job and I have a say, I won't put you on it. I will make sure you don't win. And most contractors too are aware so they also shy away from it (CPR4).

CPR8 expanded the argument further in the following excerpt:

We know that some firms are litigants so in order that we will not invite firms who are litigants we do what we call a pre-qualification for international contracts. We have to pre-qualify, look at your litigation history. In order to play it safe we make sure that firms that are prone to litigation we take them out of our midst at the pre-qualification stage so that we do not involve those ones and in order that we will not run into difficulties during the execution of the project because international arbitration can be very expensive (CPR8).

The interviewee considered excluding claim conscious or litigious contractors as 'playing it safe' and 'avoiding running into difficulties'. He provided further justification for the

existence of fear of being blacklisted: *‘No Employer will like to deal with a person who will resort to rampant international arbitration or recourse to law...you do not want to deal with a person like that’*. (CPR8). Confirming the existence of this phenomenon and its impact on contractor behaviour, CPE7 stated as follows:

The thing is that for the Ghanaian contractors you will be blacklisted if you misbehave and the foreign contractors too when they come and they see that there are more business opportunities, they know they must comport themselves, that is the motivation. So doing things that will smear the relationship or will not motivate [name of organisation] to continue working with you, they try to avoid that (CPE7).

Contractors were also aware of the threat and what it meant to their business. EP1, representing a foreign contractor, stated in relation to the implications of a contractor taking a hard line on disputes as follows:

I mean if you are talking about foreign contractors, well for the major projects there are foreign contractors. The consequences of the contractor taking that hard line is this, you can take that hard line but one, it will be the last project he ever does in Ghana... There is more profit here than there [the contractor’s home country] because there, there is competition. That is one. So given that he is making more money here, he is not in a hurry to be kicked out (EP1).

When asked why delays and breaches suffered by a foreign contracting firm were not submitted to the dispute resolution processes, EP3, representing a foreign consulting firm responded as follows:

We deal with governmental levels [institutions] so he [the contractor] doesn’t want to incur the displeasure of Government. Immediately they blacklist you, you are finished. So I think it is a sort of intimidation. Even though the master-servant relationship should not be there but you see it coming to play-so maybe it is the master-servant relationship that is why disputes are minor in this [industry], but between individuals, yes, they do occur every now and then.

The above interviewee considered the threat of blacklisting litigious contractors as amounting to ‘intimidation’. It placed the contractor in a *‘master-servant relationship with the Employer’*. APB1, an interviewee with experience in representing foreign contractors, stated in respect of the fear of blacklist that many contractors would rather preserve their relationships with government than incur its displeasure by commencing a dispute resolution process. He observed as follows: they *‘would rather sit and let the banks chase them and their assets sold than for them to sue the government’* (APB1).

Thus, even though international arbitration was part of the dispute clauses of most construction contracts, the threat of blacklist remained an effective counter-strategy against its use. Consequently, the Employer paid little attention to disputes. The fear of blacklist stifled the practice of dispute resolution and hindered the growth of formal dispute resolution processes in the construction industry in Ghana. Further implications of this practice on dispute resolution are examined under chapter eight (see section 8.3.3.4.3).

7.2.2.4. *Funding Major Infrastructure Projects*

Both documentary and interview data pointed to four main sources of funding for major infrastructure projects in Ghana. These were Government of Ghana (GoG) funding, donors, joint GoG and donors and private sources. GoG funding, the traditional source of funding was made available by the State through annual budgetary allocations. However, as Government's budgetary allocation of internal resources was unable to meet its infrastructure needs, there was extensive reliance on external funding. As disclosed by an examination of budgetary allocations to the energy, road and water, works and housing sectors across three annual national budgets, huge percentages of resources allocated to infrastructure development were from external sources (see Table 7.2, 7.3 and 7.4 below).

Table 7.2: Ghana –Budgetary Allocations for the Energy Sector (Sources: The Budget Statements and Economic Policies of Ghana for the years 2009, 2011 & 2012).

Year	Total budgetary allocation	GoG	Donor	Others
2009	¢317,243,469	¢6,070,589	¢286,172,880	¢25,000,000
2010	-	-	-	-
2011	¢405,495,572.00	¢4,289,022.00	¢371,206,550.00	¢30,000,000.00
2012	¢657,132,393	¢7,550,203	¢157,682,902	¢130,000,000

Table 7.3: Ghana –Budgetary Allocations for the Road Sector (Sources: The Budget Statements and Economic Policies of Ghana for the years 2009, 2011 & 2012).

Year	Total budgetary allocation	GoG	Donor	Others
2009	¢386,370,228	¢90,114,575	¢171,860,226	¢124395427
2010	-	-	-	-
2011	¢335,960,762.00	¢81,412,702.00	¢213,023,525.00	¢31,524,535.00
2012	¢907,794,236	¢87,340,017	¢600,394,151	¢549,355

Table 7.4: Ghana –Budgetary Allocations for the Water Resource, Works and Housing Sectors (Sources: The Budget Statements and Economic Policies of Ghana for the years 2009, 2011 & 2012).

Year	Total budgetary allocation	GoG	Donor	Others
2009	¢285,929,547	¢46,122,240	¢218,755,543	¢21,051764
2010	-	-	-	-
2011	¢558,625,890.00	¢16,618,212.00	¢529,903,428.00	¢1,165,842.00
2012	¢283,176,014	¢51,318,428	¢209,245,706	¢1,611,880

External funding sources identified included bilateral and multilateral organisations. Bilateral sources included the Danish International Development Agency (DANIDA), United States Agency for International Development (USAID), Japan International Cooperation Agency (JICA) and Canadian International Development Agency (CIDA). The multilateral sources included the World Bank and the African Development Bank. Documentary data available from one implementing agency for instance showed that between the year 2001 and 2012, thirty-one facilities made up of loans and grants were contracted for infrastructure projects. A total of US\$ 797,229,408.79 and € 390,350, 923.23 were raised to support over thirty different projects. The facilities were obtained from both bilateral and multilateral sources. The Netherlands, Belgium, Spain, USA and China were among the creditors. The main multilateral sources of funds for the implementing agency concerned were the World Bank (IDA) and the African Development Fund (ADF). The status report on development

projects for another implementing agency in the road sector also disclosed that the sector received substantial donor support from institutions such as the World Bank, ADF, African Development Bank (AfDB), the Arab Bank for Economic Development in Africa (BADEA), Japan International Cooperation Agency (JICA) and the EU.

Apart from projects which were wholly funded either by GoG or donors, there were several instances where projects were jointly funded by GoG and donors. The Sankara overpass, Tetteh Quashie-Mamfe and the Akatsi-Dzodze-Akanu road projects are examples of this arrangement. The overpass was funded jointly by GoG and France. The Akatsi-Dzodze section of the Akatsi-Dzodze-Akanu road was jointly funded by GoG/AfDB while the Tetteh Quashie-Mamfe road was funded by GoG and BADEA.

Another source of external funding was private financing. Individual contractors looking for contract awards searched for funding for projects in return for single source procurement arrangements. Various interviewees provided insights into the practice which was widespread. For instance, one interviewee described the process in the following terms:

We have a list of projects; we do not have the money to undertake the projects. The Ghana Government cannot do it on its own. So people are free to come and pick and choose which ones they could undertake. In fact when they do that... In fact there are lots of people involved. We do that together with MOFEP [interruption]. So as I was saying first of all we enter into MOU. After that, they come around, go and do their feasibility studies and then decide that ok, 'we want may be Asamankese project'. So we sit on that. We have a technical committee. We appraise their proposals and have negotiations with them and then after that we sign a contract. But that contract is subject to a lot of things. It is subject to approval by Cabinet [and] by Parliament. It is subject to what we call value for money audit. That is at the MOFEP (CPW3).

Information from one implementing agency indicated that through these financing arrangements, several projects have been executed. For instance, at the time of the interviews, the agency was on the verge of securing a \$370 million facility to undertake a major project through this arrangement. Essentially, such funds were borrowed by the Government and then on-lent to the implementing agency concerned. Whether obtained from bilateral, multilateral or private sources, external funds for projects were accompanied by conditions which

invariably shaped the construction contract and influenced how disputes were resolved.

Funding arrangements for infrastructure projects often included conditions relating to procurement, nominated Conditions of Contract and dispute clauses (World Bank, 2011, p.21; USAID, 2003). The implications of these funding conditions on dispute system design and resolution are examined under section 7.3.2 below.

7.2.3. *Foreign Consultants and Contractors*

The data indicates that many foreign contractors operating in Ghana set up under varied legal arrangements. Some operated through subsidiaries or representative companies in the country. For instance, Vinci operated in the country through Sogea-Satom, Bilfinger Berger through Razel and Taylor Woodrow, until recently, through Taysec (Bernard Krief Consultants, 2006). In such cases, the subsidiaries or partner companies were either limited liability companies incorporated as domestic entities with majority of their shares held by foreign companies or partnerships set up under the Companies Act, 1963 (Act 179) and Incorporated Private Partnership Act, 1962 (Act 152) respectively. Others set up directly as external companies. Under Section 302 (2) & (3) of Act 179 an external company is a body corporate formed outside Ghana but with established place of business in the country. Some foreign contractors functioned through joint ventures or special purpose vehicles created and duly incorporated under Ghanaian law for specific projects. An example is *Gestagua*, a Spanish company set up purposely to design and install civil and water works on the Akwapim Ridge.

Foreign contractors got involved in major infrastructure procurement in Ghana through three different routes namely, international competitive tendering, nomination under funding requirements and sole sourcing. Projects funded by multilateral institutions such as the World Bank were awarded through international competitive tendering. Invariably, foreign contractors got the nod to execute such projects. This finding accords with the conclusions of

Chan and Suen (2005) on the same subject. Lack of capacity has made it impossible for the State to depend on domestic contractors to execute major projects. Most major projects were therefore executed by foreign entities. This challenge was not limited to Ghana (see Chen *et al.*, 2007). Major European construction and design companies were named among the most prominent in the major construction market in Central and Western Africa. These included Vinci (France), Bouygues (France), Strabag (Germany) and Veolia (France). Others such as Bilfinger Berger (Germany), AMEC (United Kingdom) and Taylor Woodrow (United Kingdom) also had presence across Central and West Africa (Bernard Krief Consultants, 2006).

There were foreign contractors who became involved in infrastructure projects in Ghana by virtue of their affiliation with funding institutions. Countries providing funding for specific projects, in some cases, also insisted that contracts for such projects should be awarded to shortlisted companies from their jurisdictions. For instance, CPW10, commenting on how a presidential building complex was funded, stated as follows: *‘These were loans coming from foreign entities and they came with their conditions, the contractors came with them’*. Another interviewee with an implementing agency, observed in relation to the funding and execution of a water project as follows:

In the ST [project name withheld] similar things, like this one, occurred. I think this one [another project in the Ashanti region] the design was done by a different company but also from Netherlands because the Netherlands Government had given us the donation, they were the funding agency. So they first gave us a company, R. H., to do the designs. So when it was ready for construction, they brought in B.N. The companies came from the same country. The Netherlands government was funding the project, so they brought people to work for us (CPW5).

This practice was typical of bilateral funding arrangements. Finally, foreign contractors got involved in major projects through the process of single source procurement as described under section 7.2.2.4.

As of 2003, there were thirty-four (34) registered foreign works contractors in Ghana; twenty-seven (27) in the road sector alone (World Bank, 2003b). In the past two decades,

many Chinese construction companies have joined the competition for construction projects on the African continent (Chen *et al.*, 2007). In Ghana, Chinese construction companies such as Shanghai Construction Company, China Railway Wujia and China International Water & Electric Company were playing key roles in the major construction sector. Shanghai Construction Company constructed two national soccer stadia at Sekondi and Tamale in the western and northern regions of Ghana respectively. Sinohydro constructed the recently commissioned Bui hydro-electric dam with an estimated project cost of \$660million (Hensengerth, 2011). Similarly, international design companies were active in the domestic construction market. Coyne et Bellier (France) and Environmental Resource Management (United Kingdom) conducted the feasibility studies on the Bui Dam project.

Review of previous studies disclosed that foreign contractors preferred international arbitration when it came to construction dispute resolution (see section 4.4). However, the literature does not capture the role of bilateral and multilateral funding organisations in the setting up of arrangements for the eventual use of international arbitration. The interview data disclosed that the dispute resolution processes were influenced by funding arrangements (see section 7.3.2.1). By virtue of the involvement of foreign contractors, the context of infrastructure-related dispute resolution extended beyond the jurisdiction of Ghana. Other effects of the nature and preferences of foreign contractors on dispute resolution are discussed under section 8.3.1.

7.3. Procurement

This section reports the findings of the data analysis captured under the theme ‘Procurement’. The theme captured outcomes of the data analysis on procurement rules and methods in use in Ghana, the formation of construction contracts and dispute resolution system design, and the effect of procurement on dispute resolution. Other issues covered under this section include claim events and dispute causes and the settlement of claims.

7.3.1. Procurement Rules and Methods in use

Ghana follows the common law tradition. Consequently, its legal system is modelled along the lines of the English system. The main sources of law, as outlined under Article 11 of the 1992 Constitution, are the Constitution, legislation (Acts of Parliament and Decrees), Orders, Rules and Regulations and the common law. The common law comprises the common law as received from Britain and developed through judicial refinements, the law of equity as received and customary law (the Constitution, Article 11(2)). As the Supreme law of Ghana, the 1992 Constitution guarantees equal rights and makes the Government liable to claims in contract and tort like a private individual, albeit subject to certain limitations (see the Constitution, Chapter 5 & Article 293 and the State Proceedings Act, 1998(Act 555), ss. 2 & 3).

The main legislation governing procurement in Ghana is the Public Procurement Act, 2003 (Act 663). Details of this legislation have already been examined (see sections 3.5). Sections 14 and 96 of Act 663 excluded from its scope situations where a loan agreement, guarantee contract or foreign agreement provides different procedure for the utilisation of funds. Section 96 provides as follows: *‘Despite the extent of the application of this Act to procurement, procurement with international obligations arising from a grant or concessionary loan to the Government shall be in accordance with the terms of the grant or loan’*. In effect, there were two sources of procurement rules in Ghana; (a) those under Act 663 which were mainly statutory; and (b) those under contractual arrangements between the Employer and funding organisations. Most infrastructure projects in Ghana were procured under the latter.

Procurement methods found to be currently in use in the procurement of infrastructure in Ghana included the traditional methods, design and build, Engineer, Procure and Construct and public-private partnerships (PPP) (GOG, 2011). Major construction works in Ghana were procured largely through the traditional procurement method (see section 3.3.1). Half of the

fifty-six interviewees who were asked to indicate which procurement methods were commonly used for infrastructure project acquisitions mentioned the traditional methods. For instance, CPW 11 observed as follows:

Let me give you a little bit of a reminder that our jobs are mainly government jobs. Now, when you are dealing with government, it's very difficult to bend. It's extremely difficult to bend, so we are still using the *traditional procurement system*. That's what we are still using. Traditional, that means, an Employer wants to build, consults a consultant, a designer designs it; it is quantified and priced out. He says well, yes, you may go ahead with procurement, we invite tenders, we open tenders, evaluate and award to a contractor, give him a start and conclusion date, he starts. As he builds, well, government payment system being what it is, you are normally not able to enforce the construction schedule, so you run it like that until completion. This is what has been going on and that's what we are still using generally.

The common practice was that survey, design and estimation were often treated as a package distinct from the construction phase. Different funding arrangements would usually be made for the feasibility studies and design phase on one hand and the construction phase on the other. In many instances, there was considerable time lag between the period when such studies and designs were conducted and when the construction took place. Thus updating technical reports and designs prior to construction was a common occurrence.

There were also occasions where designs had been identified to be inadequate in the course of the construction thereby raising issues of buildability. These scenarios often led to change of designs and sometimes extensive changes in the scope of works. The effects of such variations on cost and delay were enormous. For instance, CPR9 gave an example of a project which commenced with dated designs. Subsequently, the contractors discovered a large stretch of unfavourable ground condition which was not detected by the Employer due to lack of a thorough geo-technical test prior to execution. This resulted in a huge increase in the contract cost.

Design and build and Engineer, Procure and Construct (EPC) procurement methods were also in use. Some of the notable design and build and EPC projects in Ghana included the Accra and Kumasi Sports stadia (Micheletti, 2011), two new stadia at Essipong in Sekondi

and Tamale respectively, the Accra Waste Project (Taysec, 2011), the four hundred MW capacity Hydro-electric dam at Bui, in the Brong-Ahafo region of Ghana (Hensengerth, 2011; Baah and Jauch, 2009), and the €45 million Tamale Water Supply Extension Project completed in 2008 (Ghana Water Company Limited, 2011). Most of the design and build projects were externally funded projects. Design and Build and EPC were relatively prevalent in the Water and the energy sectors. The only collaborative procurement method identified in the data was the Public-Private Partnership (PPP).

Procurement strategy was mainly driven by funding preferences. There was an indication that the existing procurement process paid no attention to the potential impact that it could have on dispute prevention and management. APA explaining why this was the case, observed as follows:

Dispute doesn't come into their [Employer] mind because the government is still the largest Employer and the construction sector is almost entirely engaged by government and there is something called blacklisting which is an unwritten rule and if you complain too much, you will be blacklisted. So because of that there are only few disputes that arise from government projects. Many people who are cheated or who have reasons to raise claims don't because they don't want to be blacklisted.

7.3.2. The Contract Formation and Review Process

Bid documents included Conditions of Contract. It was a matter of common knowledge among interviewees that the construction contract was not made up of a single document. There was the agreement and then other documents were deemed to be part of it. These included the letter of acceptance, the bid and appendix to the bid, the Conditions of Contract, the designs and the Priced bill. These documents were hierarchically arranged in order of importance. In this study, the focus was on the Conditions of Contract, its provisions on dispute resolution and the dispute system design generally.

7.3.2.1. *Nominated Conditions of Contract*

Both the World Bank and USAID expressly demanded the use of the FIDIC suite of contracts on their projects (World Bank, 2011, p.21; USAID, 2003). European Union funded

projects were executed under EU Conditions of Contract. Other multilateral institutions also subscribed to the FIDIC forms. Majority of the fifty-six interviewees identified the FIDIC suite of contract as the most popular for major infrastructure projects. The view of CPR1 captured succinctly observations made by the other interviewees:

Mostly, the FIDIC Standard forms are used. The FIDIC Red book, 1987 has been the main standard form. In recent times, we have also used EPC for some projects. One that comes to mind is the Adomi Bridge rehabilitation. The FIDIC forms are suitable and widely accepted. The European Union also has its contract forms. Apart from the EU however, most contractors are agreeable to the FIDIC forms.

FIDIC conditions were used for projects in the road, water and energy sectors. There were also indications that bespoke contracts were used particularly for works in the energy sector. Even so, such contracts still benefitted from insights from the FIDIC provisions. CPE5, commenting on the use of FIDIC conditions for the procurement of thermal plants in Takoradi and Tema, stated as follows:

I think in Takoradi it was FIDIC, that is the T1 (thermal one) contract. Other projects that we have done like in Tema we used FIDIC but sometimes there are variations - like [for instance] the T3 project that we are doing is not a FIDIC contract per se but it is a contract which has been developed by the company themselves [bespoke contract] so we go over all the issues and as much as possible we borrow from what is applicable in the FIDIC because those are the standard things that you will consider.

Most of the bidding documents and the signed construction contracts sighted contained the FIDIC conditions. In fact, the use of the FIDIC suite of contracts had become so entrenched that even major projects funded wholly by GoG were awarded under the FIDIC Conditions of Contract. The dominance of the FIDIC range of contracts was attributed to three reasons. Firstly, both multilateral and bilateral funding organisation demanded that the FIDIC conditions be used for sponsored projects. Secondly, the influx of foreign contractors and the need to use standard forms which all parties were familiar with had also contributed to the dominance of the FIDIC forms. Finally, most interviewees generally agreed that the provisions in the FIDIC forms were fairly balanced and addressed concerns of both Employers and contractors.

Generally, contractors saw the FIDIC contracts as a safer preference. The FIDIC

Conditions of Contract had two main components namely the General Conditions and the Special Conditions. The General Conditions were standard clauses often applicable to most construction and engineering projects. These included clauses on dispute resolution. The Special Conditions were the project specific changes that parties agreed to make to the General Conditions. Some of these changes also pertained to the arrangements for future dispute resolution.

7.3.2.2. *Dispute Clauses*

Dispute clauses were part of nominated Conditions of Contract. The FIDIC Conditions of Contract for Construction (the Red book) (1987 editions) had dispute clauses which required parties to resolve disputes by the Engineer's determination, amicable settlement and international arbitration (see Clause 67 of the FIDIC Red book, 1987 Edition). In subsequent editions of the FIDIC Red book (the 1999 edition and the FIDIC MDB Harmonised Conditions of Contract, 2010), Engineers determination has been replaced with the Dispute board. Consequently, clause 20 of the FIDIC Red book, 1999 and the MDB Edition, 2010 identify negotiations, dispute adjudication boards, amicable settlement and international arbitration as the mechanisms for the resolution of construction disputes arising out of projects which are subject to the provisions of these FIDIC Conditions of Contract. The dispute clauses in both the 1987 and the 1999 versions of the FIDIC Conditions were utilised with little or no modification in Ghana.

For instance, the construction agreement between the GoG and Construction Pioneers Baugesellschaft Anstalt (CP) dated 5 December, 1996 for the asphaltic concrete overlay of a portion of the Biriwa-Takoradi Road in the western region of Ghana incorporated Clause 67 of the 1987 edition of the Red book on dispute resolution without any modification. Except for the addition of information on project-specific issues such as rules and venue, the clause was a verbatim reproduction of Clause 67(1) of the FIDIC Red book, 1987. Similarly, parties

to the construction contract covering an aspect of the Kintampo-Paga Road incorporated the provision of Clause 20 of the FIDIC Red book, 1999 edition. In this instance, the dispute mechanisms used were the dispute board, amicable settlement and international arbitration. However, in the case of the Bamboi-Bole Road Project, although the transaction was based on the FIDIC Red book, 1987 Edition, the parties amended Clause 67 to include a Dispute Review Expert as a replacement for the Engineer's determination through the special conditions. The new Clause 67(1) provided in part as follows:

If any dispute arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the execution of the Works or after their completion and whether before or after their repudiation or other termination of the Contract, including any disagreement by either party with any action, inaction, opinion, instruction, determination, certificate, or valuation of the Engineer, the matter in dispute shall, in the first place be referred to the Dispute Review Expert ('DRE').

Copies of construction contracts covering EU sponsored projects obtained revealed the use of different dispute clauses. Article 68 of the EU General Conditions provided for the resolution of disputes by amicable settlement in the first instance. If one hundred and twenty days after notification of dispute was served parties were unable to settle, then parties will need to pursue conciliation. Article 68(3) provided as follows:

In the absence of an amicable settlement, a Party may notify the other Party in writing requesting a settlement through conciliation by a third person. If the European Commission is not a party to the contract, the Commission can accept to intervene as such a conciliator. The other Party shall respond to this request for conciliation within 30 days. Unless the Parties agree otherwise, the maximum time period laid down for reaching a settlement through conciliation shall be 120 days from the notification requesting such a procedure. Should a Party not agree to the other Party's request for conciliations, should a Party not respond in time to that request or should no settlement be reached within the maximum time period, the conciliation procedure is considered to have failed.

Unlike the World Bank, the European Commission was willing to act as a conciliator for disputes which arose out of EU funded projects. When both amicable settlement and conciliation failed, parties *'may refer the dispute to either the decision of a national jurisdiction or arbitration, as specified in the Special Conditions'* (Article 68(4) of the EU General Conditions). Parties were at liberty to elect between using national courts or

arbitration in the Special Conditions. For instance, the Special Conditions of the contract on the Tarkwa-Bogoso-Ayamfuri Road, an EU project, provided that disputes arising out of transnational contracts were to be settled by any of the following processes:

- (i) if the parties to the contract so agree, in accordance with the national legislation of the beneficiary country or its established international practices; or
- (ii) by arbitration in accordance with the procedural rules on conciliation and arbitration of contracts financed by the European Development Fund, adopted by Decision No. 3/90 of the ACP-EEC Council of Ministers of 29th March 1990(Official Journal No L382, 31:12:1990).

Parties were required to negotiate dispute resolution clauses within the parameters provided by these Conditions of Contract.

7.3.2.3. *Special Conditions: Negotiating Dispute Clauses*

Dispute clauses in General Conditions were hardly altered in any substantial way by parties. During contract negotiations, the most parties did was to agree on details relating to the use of international arbitration, or in rare cases where DABs were used, agree on details on the setting up of the DAB and its membership. As a matter of regular practice, terms on the following were agreed by the parties: (i) the entity or body which was to administer international arbitration; (ii) the venue; (iii) arbitration rules to be applied; (iv) the governing or applicable law; (v) the language; and (vi) the number of arbitrators and the selection process. The rules of arbitration often used included the UNCITRAL and the ICA rules. The venue would often be in London, The Hague, Geneva or France. The applicable law would usually be Ghana law even though this was not always the case. The language was always English. The parties would either agree on an arbitrator or three arbitrators. Parties had limited influence over the selection of dispute resolution mechanisms as they were required to negotiate within the confines of dispute clauses in the Conditions of Contract usually nominated by funding organisations. Other considerations which informed selection of dispute resolution mechanisms included the nature of the parties, value of project, enforceability, fairness and neutrality (see Figure 7.3 below).

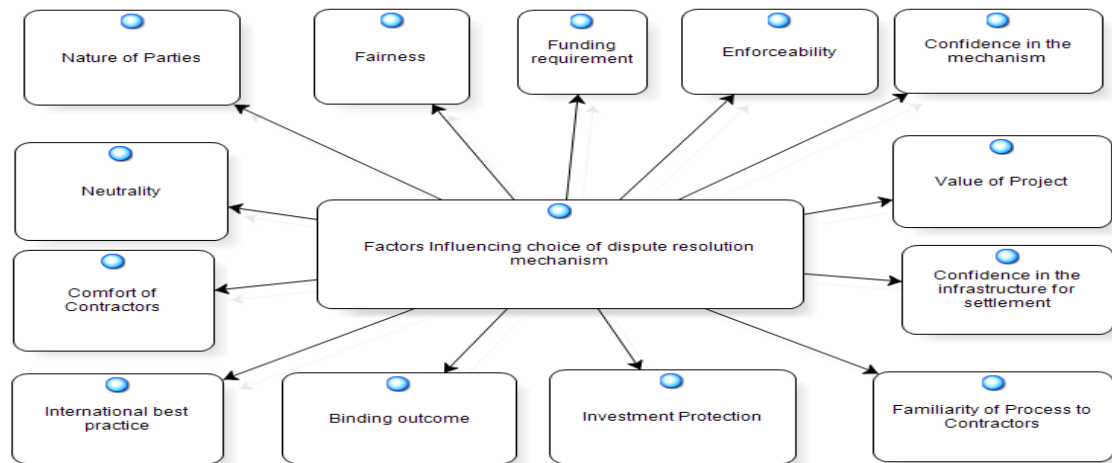


Figure 7.3: Factors influencing selection of Dispute Resolution mechanisms (Source: Field data)

The process of designing dispute resolution systems as examined above had implications for ownership of the dispute resolution edifice and dispute resolution practice in general (see section 8.3.2).

7.3.2.4. Impact of Public law requirements on Construction Contract Formation

For building and civil engineering projects involving the State, concluding contract negotiations and signing the construction agreement was not enough for the parties to commence execution. By virtue of the involvement of the State or its agencies, there were additional public law requirements which parties needed to meet. One such legal requirement was Article 181(5) of the 1992 Constitution. This provision was specifically examined in this study because of its likely impact on the validity of construction contracts and the implications of such impact on dispute resolution. The first five clauses of Article 181 of the 1992 Constitution are reproduced below:

- (1) Parliament may, by a resolution supported by the votes of a majority of all the members of Parliament, authorise the Government to enter into an agreement for the granting of a loan out of any public fund or public account.
- (2) An agreement entered into under clause1 of this article shall be laid before Parliament and shall not come into operation unless it is approved by a resolution of Parliament.
- (3) No loan shall be raised by the Government on behalf of itself or any other public

institution or authority otherwise than by or under the authority of an Act of Parliament.

- (4) An Act of Parliament enacted in accordance with clause (3) of this article shall provide,
 - (a) that the terms and conditions of a loan shall be laid before Parliament and shall not come into operation unless approved by a resolution of Parliament; and
 - (b) that any monies received in respect of that loan shall be paid into the Consolidated Fund and form part of that Fund, or into some other public fund of Ghana either existing or created for the purposes of the loan.
- (5) This article shall, with the necessary modifications by Parliament, apply to an international business or economic transaction to which the Government is a party as it applies to a loan.

Failure to comply with Article 181(5) had implications for transactions which came under its purview such as major infrastructure contracts involving foreign entities and the State. Lack of compliance also had repercussions for the dispute resolution processes outlined under those transactions.

In *A-G v Faroe Atlantic Company Limited (the Faroe Atlantic Case)* [2005-2006] SCGLR 271 the Supreme Court of Ghana held that an agreement between a company incorporated in the United Kingdom and the Government of Ghana which required the former to generate and supply electricity to the latter constituted an international business transaction to which the Government of Ghana was a party and thus required parliamentary approval to be operative. In this case no parliamentary approval was obtained prior to the execution of the contract. The Court held that the effect of the non-compliance with Article 181(5) was that the contract in question was void. Consequently, the Court ordered the private party to refund all payments it had received under the contract.

In *A-G v. Balkan Energy (Ghana) Limited & Ors (the Balkan Energy Case)* [2012] 2 SCGLR 998, a case involving another power purchase agreement between a company registered in Ghana with majority foreign ownership and the Government of Ghana, the Supreme Court held that even though the company was registered in Ghana, the transaction in question had significant foreign elements and thus constituted an international business

transaction and therefore required parliamentary approval. The implication of the decision of the court was that the PPA was void. Significantly, the Court held that the arbitration clause under the power purchase agreement was not an international business or economic transaction and thus survived the apparently void contract.

The subject matter of the case of *Martin Amidu v A-G & 2 Ors ((The Waterville Case)* Suit Number J1/15/2012, judgment of 14 June 2013), were two contracts for the rehabilitation (Design, Construction, Fixtures, Fittings and Equipment) of two 40,000 seating capacity sports stadia in Kumasi and Accra and the upgrading of a third (the El Wak Stadium) also in Accra. Both contracts were between the Republic of Ghana and Waterville Holdings (BVI) Limited, a company incorporated in the British Virgin Islands. The contracts, signed on 26th April 2006 as part of preparations towards the hosting of the 2008 African Cup of Nations, were subsequently terminated. Consequently, the Contractor made a claim and eventually secured payment through mediation led by the then Attorney-General, for work done prior to the termination. The Applicant, a former Attorney-General of Ghana, sought a declaration that the said contracts never received parliamentary approval prior to execution and thus contravened Article 181(5) of the 1992 Constitution. He further sought an order directed at the contractor to refund all payments made by the State to it pursuant to the two contracts. The Defendants resisted the Applicant's action arguing, *inter alia*, that they fully complied with all requirements under the Public Procurement Act, 2003 (Act 663) and received the necessary approvals from the Central Tender Board. They relied on the Court's earlier decision in *City & Country Waste Ltd. v Accra Metropolitan Assembly (the CCWL Case)* [2007-2008] 1 SCGLR 409 (where the Court had exercised its discretion to allow restitution under an illegal contract).

The Supreme Court held that the contracts which did not receive parliamentary approval were null and void and ordered that money paid under them be refunded. In the recent cases

of *Amidu v Attorney-General & 2 Others (Isofoton Case)* (21 June 2013, Supreme Court (Unreported)) and *Klomega v Attorney-General & 3 Others* (19 July 2013, Supreme Court (Unreported)) the Supreme Court made similar orders for refund of monies paid under contracts which did not comply with Article 181(5) of the Constitution. Significantly, mediation, one of the dispute mechanisms which the parties agreed at the contract negotiation stage, incorporated into the construction contract and utilised to settle disputes arising from the transaction, was swept aside by the decision of the Court.

The implication of the above decisions is that Conditions of Contracts agreed between parties to infrastructure projects remained invalid until the transactions they related to received parliamentary approval. Dispute resolution arrangements and steps taken pursuant to such arrangements were all void on the grounds of violation of the provisions of Article 181(5) of the Constitution. The only exception is the arbitration clause. In the *Balkan Energy* case, the Supreme Court upheld the validity of the arbitration clause.

7.3.3. Legal Institutions

Chapter eleven of the Constitution vested judicial power in the judiciary and gave it jurisdiction over all civil and criminal matters. The chapter also established a hierarchically organised court structure with the Supreme Court at the apex. Decisions from the High court are appealable to the Court of Appeal and subsequently to the Supreme Court (see also the Courts Act, 1993 (Act 459)). The High Court has divisions including those on land, human rights and commercial transactions. Construction disputes are classified as commercial disputes under the Commercial Court rules (see the High Court (Civil Procedure) Rules, 2004 (C.I. 47), Order 58). Order 58 makes mediation mandatory prior to trial.

Notwithstanding court reforms during the past decade and a half, there was still overwhelming evidence that parties to major infrastructure projects generally avoided the courts as means of resolving disputes. Reasons for this practice included old perceptions of

inordinate delays and fear of bias in favour of the Employer (see Asouzu, 2001). Construction contracts encountered did not designate litigation as a dispute resolution option. However, it was found that in some instances, parties resorted to litigation in the national courts. In *Construction Pioneers Baugesellschaft Anstalt (CP) v. Government of Ghana* (Case No. 12078/DB/EC, International Court of Arbitration) for instance, whilst the arbitration was on-going there was a parallel court proceeding dealing with an issue of fraud against one of the parties in the Ghanaian courts. A similar trend was seen with *the Balkan Energy Case*. Litigation remained a very active dispute resolution process.

Apart from the courts, the Alternative Dispute Resolution Act, 2010 (Act 798) established the Alternative Dispute Resolution Centre. The role of the Centre was to facilitate the enforcement of the provisions of the Act (see Act 798, s.115). However, the idea of state-owned alternative dispute resolution centre appeared to be outmoded at birth. The data revealed a general dislike for the establishment of another public institution in charge of dispute resolution in addition to the courts. The remarks of the following interviewee on the establishment of a State-owned centre for ADR sums up the views from the interviews:

We have the judiciary the court system which is saddled with numerous problems. The State has not been able to solve the problems at the court; automation is still going on. Other courts are still not automated... Now the State creates another institution. I will put that one aside. Have you heard - may be, in the Far East but I don't know - that there is a State which has an arbitration institution where parties go and resolve their dispute? What happens if the State is involved in a dispute with another entity? The ICC is not a state entity, LCIA is not, AAA is not, and the Ghana Arbitration Centre is not. It undermines the neutrality; it doesn't engender neutrality in arbitration proceedings involving the State and another party.

Beyond the State-sponsored ADR Centre, there were burgeoning private institutions administering ADR notably the Ghana Arbitration Centre. However, there was some distrust in the competence and capacity of local private institutions to handle disputes from major projects involving substantial sums of money. The view of APC, an interviewee, reflected the views of those sceptical of the ability of domestic private organisations to handle construction disputes arising from major projects:

If you are looking at dispute resolution in a contract document involving infrastructure project of \$300million, you say we should go to the Ghana Arbitration thing that has been set up – I don't even know if it is working-this, the local [interviewee stammers] no contractor will...[interviewee pauses] with no disrespect to it[the Centre]... It [dispute resolution] usually involves an arbitration process involving the ICC or one of these kinds of bodies which are not based in Ghana.

Lack of ADR infrastructure meeting international standards was also emphasized by some interviewees. But, it appeared that actors involved in major infrastructure procurement did not have full knowledge of the capacity and activities of the private ADR institutions.

7.3.4. Use of Alternative Dispute Resolution

There was no legislation dealing specifically with construction dispute resolution. The Alternative Dispute Resolution Act, 2010 (Act 798) sets out rules on arbitration, mediation, conciliation and customary arbitration. However, it applied generally to all subject areas except those expressly excluded under section 1 of the Act which provided as follows:

This Act applies to matters other than those that relate to
 (a) the national or public interest;
 (b) the environment;
 (c) the enforcement and interpretation of the Constitution; or
 (d) any other matter that by law cannot be settled by an alternative dispute resolution method.

It has been argued elsewhere that this provision on arbitrability excluded major construction transactions from its purview because invariably they constituted matters of public or national interest (see Mante and Ndekugri, 2012). The implication of this legislation for dispute resolution is examined under section 8.3.3.4.4.

7.3.5. Claim Events and Dispute Causes

The literature on what constitutes claims and disputes and their causes was examined under section 4.2. In the absence of an official database cataloguing all infrastructure-related construction disputes in Ghana, it was impossible to provide figures on prevalence. Nevertheless, the qualitative data suggested a dispute-rife sector. The study identified several regular claim events and dispute causes. A summary of information on fourteen of these events is presented in Table 7.5 below.

Table 7.5: Claim Events and Dispute Causes (Source: Field Data)

1	Poor definition of scope	<p>There was often a mismatch between the Employer's requirement and the contractor's obligations. The statement of APC, a contract reviewer, on this issue sums up the views of interviewees. APC observed as follows:</p> <p><i>One of the things which immediately come to mind is poor definition of the scope. That is a big issue. What happens is that the owner of a project, the government side, is unable or do not take time to state or think through the scope of projects, what in engineering is called the Employers' requirements. What we see a lot of the time is that there is a dis-connect between that and what the contractor offers. Even if they know it, they don't state it clearly, properly, with all the information that the contractor can then respond to. That is a big big issue. Because as a result of that, we as an independent party look at it and in our view, the Employer's needs and the contractors' offers do not match. We therefore have to find a way of bringing those two positions together. In our view, a lot of those could have been shortened if clearer definition of what they want is put out there.</i></p>
2	Unfavourable ground conditions	<p>This was described as a challenge which can distort everything. It affected the value of the contract, led to massive claims. Citing an on-going project as an example, CPR9 emphasized the need for thorough geo-technical investigation prior to the award of contracts. In the example above, the initial investigations failed to locate a huge rock covering a whole stretch of the civil works being undertaking. Neither the initial design nor subsequent physical inspections by the contractor revealed its existence. The contractor had given notice that the work required to remove the rock has not been priced. The Employer is reluctant to accept the situation.</p>
3	Employer interference	<p>Examples of Employer interference encountered included: (a) political figures requesting aspects of signed contracts to be varied without recourse to the normal contractual channels for effecting such variations; and (b) political figures instructing contractors to go onto site without detailed designs (see <i>The Waterville Case</i>).</p>
4	Site possession issues	<p>Many major infrastructure projects affected private properties. Such properties were compulsorily acquired by the State to pave way for execution. As CPR4, CPR 9 and EP3 indicated, in most cases compensation payments for the acquired sites delay and often remained unpaid by the time the project begins. Affected persons see commencement of work as a trigger to agitate for payment. According to EP3, external funding did not cover such payments. It therefore fell to GOG to secure funds for such purposes. Predictably, such payments often suffered delays and this results in disruption of work.</p> <p>CPR9 and EP 2 recounted various instances where relocation of utilities posed serious time and financial challenges to projects. In most cases, access to site was not given. For the Contractors, idling equipment and workforce, and delay causing disruption of</p>

		work schedules made claims inevitable.
5	Delayed payment	This was one of the key causes of disputes in Ghana. CPR 4 commenting on causes of disputes stated as follows: <i>One major problem is delay in payment especially where government of Ghana contributes to the funding; it happens that we always delay in paying our portion. Where it is wholly GOG, then that's a major factor...we delay in paying so they bring interest on delayed payments. Sometimes, the contractors give notice and stop work. So once you pay them then they will remobilize and start the work again. So all those stand still costs will come in as claims. So that's one major issue.</i>
	Design changes	Design changes in the course of construction may be a normal feature of major projects. However when they become a regular occurrence, their impact on claim becomes visible. CPR 4, CPR8 and CPR 9 alluded to the pervasiveness of the practice in Ghana particularly with Government projects. Excessive design changes led to delays, alteration of work schedules, and request for additional resources to meet the new requirements. The consequences were claims for additional sums and extension of time (CPR9).
7	Delays	These were, generally, the immediate claim triggers and were very rife.
8	Extra work	The Employer often instructed contractors to execute extra work beyond what was originally agreed and this was another source of claims (EP1&CPE5).
9	Inadequate engineering studies	Most projects commenced on the basis of inadequate engineering studies. CPR4 and CPR 9 acknowledged that this situation often resulted in outright change of scope of the original project with implications for revision of rates, extension of the completion time, payment of additional overheads and claims for idle equipment etc.
10	Incomplete design	Related to the issue of inadequate engineering studies was the challenge of awarding major projects based on incomplete, outdated or non-existent designs. CPR4, for instance, admitted that sometimes they were 'forced' to start projects with incomplete designs.
11	Laxity in contract administration	Many issues matured into disputes due to the Employer's laxity. This fact was confirmed by CPA4, EP2 and CPR 9. They attributed some claims made against the Employer to officials who failed to perform their roles promptly and as a result caused unnecessary delays on projects.
12	Use of traditional procurement method	After presenting lower bids to secure selection, most contractors tended to focus on aspects of the transaction which could be exploited to make up what they have lost. CPE 5 gave two examples of recently executed projects which encountered such practices. In both cases, the projects had been successfully completed. Then the contractors set out to identify issues related to the projects and then set a claim process in motion. From the interviews, many of such claims eventually resulted in disputes as

		the Employer often rejected such claims.
13	Variations	Most interviewees involved in project implementation were unanimous on the issue of regular occurrence of substantial variations in Government projects.
14	Breach of contract	Wilful breach of contract was common. In response to a question on the causes of disputes, CPA1 replied, ' <i>Non- performance, breach of contract, you have given it to X you signed, and then you go and give it to Y. We have plenty of that. And they are suing us for breach of contract</i> '. This was confirmed by CPA4 and other interviewees.

Where the above-listed events existed, the likely consequences were claims by contractors.

Where claims based on these conditions were rejected expressly or by inference, disputes resulted (see section 4.2).

7.3.6. Settling Claims

The Conditions of Contract determined the circumstances under which a claim was to be admitted and processed. Though minor differences in practice were observed from one implementing agency to another, the following represented the general procedure as gathered from the interviews. The first point of call was the Engineer or his representative who was either a Resident Engineer or a private consultant. The roles of the Resident Engineer or private consultant remained as stipulated under Clause 2.2 and 2.3 of the 1987 FIDIC Red book and Clause 3.1&2 of the 1999 edition. The claim procedure in practice very much reflected the procedure outlined under Clause 53 of the 1987 FIDIC Red book and Clause 20(1) of the FIDIC Red book 1999. The contractor was required to serve a copy of the claim on the Employer as well. The Resident Engineer or the consultant who received the notice of claim and the evidence in support was obliged to ensure that the contractor had complied with the requirements of the contract.

Once a claim was received, it was the responsibility of the Resident Engineer or the consultant to vet them, request for additional supporting information and write an opinion indicating whether or not the claim was justified. CPR 4 described the claim process at this stage as it pertained to current practice as follows:

I mean before we admit any claim, we ensure that it satisfied the claim procedure so that's what we tell our people on projects. We normally hold seminars from time to time and claim is an issue which we discuss. We tell them that, from day one they can stop – some of these claims are rather frivolous, they are afterthoughts. If you are supposed to give notice within twenty-eight days, provide details within twenty-eight days and the engineer is supposed to start taking his records – your notice is to get the engineer informed that something is going wrong, he can stop it – he better stop it and avoid any escalation of the situation so if you don't follow those things when your claim comes, they will knock it out.

At this stage, the Resident Engineer or consultant could intervene to stop the claim from proceeding further (if there was a justification) through initial discussions with the contractor.

CPR 9 gave an example of such an intervention which resulted in the withdrawal of a claim of about six million US dollars against the Employer. The Resident Engineer's opinion was usually forwarded to the implementing agency which acted as the Engineer or the Employer's Representative. Upon receipt of the Resident Engineer's report, a team examined the report as against the claims from the contractor. The team was often made up of experts at the implementing agency. If there was a need for further particulars or evidence to be sought from the contractor, this was done.

After a thorough deliberation, the opinion of the Resident Engineer was accepted, modified or substantially altered depending on the conclusions of the Engineer. The Engineer's determination was subsequently prepared and this would indicate that the contractor was entitled to its claim, part of it or was not entitled at all. There was evidence that the Engineer's determination was forwarded to the Employer (the Ministry responsible) especially when the determination involved payment of additional money. The Ministry's comments would then be considered and the final position agreed was communicated as the Engineers' determination to the Contractor. When the Engineer's determination was accepted by the contractor, the claim or difference was deemed settled. When the Engineer's determination was rejected by the contractor either expressly or by inference, a dispute was deemed to have emerged.

7.4. Construction Disputes Resolution - Mechanisms and Procedure in Use

Three categories of dispute resolution mechanisms (DRMs) were identified from the interviews. These were (i) DRMs incorporated into the Conditions of Contract and regularly used by parties; (ii) DRMs incorporated into Conditions of Contract but rarely used; and (iii) DRMs not expressly stipulated in construction contracts but in use.

7.4.1. DRMs Regularly used

Engineers' determination, negotiations and international arbitration were the DRMs frequently used by parties. The findings of the data analysis in relation to these DRMs are briefly examined below.

7.4.1.1. *The Engineer's Determination*

The first point of call for all construction disputes and differences was the Engineer. This was partly due to the continuing use of the FIDIC Red book, 1987 for major infrastructure projects in Ghana. The Engineer's role as it related to dispute resolution derived from clause 67 of the FIDIC Red book, 1987 which requires that all disputes and differences between the Employer and the Contractor be referred to the Engineer. In this regard, Seppala (1987) distinguishes a dispute between the Engineer and the contractor from a dispute between the Employer and the contractor. The former relates to matters the Engineer has power to address under the Conditions of Contract such as dealing with claims. The latter on the other hand, related to matters over which the Engineer had no prior power to address under the Conditions of Contract.

Practice on the ground as observed through the data did not lend itself to a strict distinction between the role of the Engineer under Clause 53 in relation to claims and his role under Clause 67 in relation to disputes. Thus the practice regarding the Engineer's determination of disputes and differences followed substantially the same process as it was with claims (see

section 7.3.6). The only difference was that in the case of a dispute, the contractors' reference expressly indicated that it was made pursuant to Clause 67 of the FIDIC Red book, 1987.

It was observed from the data that the roles of implementing agencies of Government as Engineers of projects hampered dispute resolution. CPA4 commenting on this subject stated as follows:

In Ghana, invariably the Employer's representative or the Engineer is the ... [an implementing agency] that is another state institution. So the contractors don't feel comfortable dealing with them. So you realize that the matter is not resolved at that level. It is hardly resolved. And so at a point in time the Ministry will refer it [disputes] to the A-Gs.

This finding raised the question of independence of the Engineer as an arbiter of dispute between the Employer and contractors. This concern arguably resulted in the replacement of the Engineer with the Dispute Board under the FIDIC Red book, 1999 (see Ndekugri *et.al*, 2007).

Where the Engineer's determination was rejected by the contractor, it was often followed by series of negotiations. CPR 5 gave the sequence of events after the Engineer has made it findings as follows:

After doing our bit at ... [Employer's representative], we have to forward our comments to the Ministry. They are the policy makers and they sit on top of everybody. We tell them our recommendations. They also go through, agree or disagree with us. If they disagree, whatever amendments they suggest we make but of course, we meet and talk. Then we arrive at a common position of the ministry and that is then communicated to the contractor as the decision of the engineer and the Employer. Now, if the contractor is satisfied, that ends it. If not, then he will write back and that is when we now invite them for negotiations.

Negotiations ensued after a dispute has emerged.

7.4.1.2. *Negotiations*

Negotiation was a mechanism for both dispute avoidance and resolution. It was viewed broadly as entailing face-to face meetings where parties stated their cases, supported it with evidence and discussed a way out of their differences. Phrases such as '*bargaining with the other side*', '*engaging the other party*', '*parties resolving disputes by themselves*' and '*settling with the other side*', '*no third party come between us*' were used to describe the negotiation

process. It stood out that negotiations conducted after the emergence of disputes were often formal and were undertaken by teams. For instance, CPE4 described the practice in an implementing agency in the following words:

Most often, we get somebody from- mostly our engineers lead us to get somebody who is best in negotiations and then we go round interviewing them and pick the best and he will come and lead the team so we have our technical, our legal, our finance sitting with him.

The practice of other agencies of the Employer was to use adhoc teams made up of professionals such as quantity surveyors, engineers, contract specialists, and representatives from the supervising Ministry, the A-Gs and MOFEP for negotiations. No single entity or individual had complete control over the process and this often created problems with coordination, cooperation and decision-making. Foreign contractors, on the other hand, were often represented by company officials and their legal teams.

There was mutual willingness to cooperate to address disputes during the early stages.

Observations from CPW5, an interviewee from an Employer organisation and EP1 representing a foreign contractor are used to illustrate the cooperation and goodwill that parties exhibited during negotiations. Speaking from the perspective of the Employer, CPW5 observed as follows:

The idea is that we here always believe that the contractor is working for our good so we want to support them as much as possible to realize the project for us. At the end of the day when they do a good job the people get water everybody is satisfied then we are all moving on. So the principle is to assist them to do a good job for us and not to have a kind of acrimony, fighting with them. So once you have this spirit you have an open way of working. When you have a dispute and you are talking about it, everybody knows that it is not because you are attacking personal interest but because you want the good of the thing, so we try to sit down and look at it frankly and resolve it rather than trying to look elsewhere. So that is normally what has helped us (CPW5).

EP1, an interviewee representing a contractor involved with several major projects in Ghana also commented on the cooperative approach in the following excerpt:

The people in Ghana are very friendly people, you see, very friendly people. You even feel that the Employer is your friend because of the attitude and the smiling; you know he is a friend. So it is not the hard line that you have over there where no one cares about the next person. You do the job and that is it. It's not like that. So because of

this it's very difficult for the contractors to take issue and they know that there is no money and they know they are going to go through a lot of trouble and expense and they will rather just let it go, if it really comes to that.

Thus, negotiations were characterized by reciprocity and consideration of the cost of possible alternatives. Negotiations commenced with lower level organizations such as implementing agencies, but were periodically escalated to the ministerial level and sometimes even to the level of the Presidency. CPR1, describing the stages of engagement, stated as follows:

There are more or less two stages where amicable settlement is attempted after the Engineers determination; the first attempt takes place at the level of the implementing agencies and the second is at the Ministerial level. At the latter stage, the A-G's Department is notified and representatives from the Department become involved in the settlement process at the ministerial level right from the onset (CPR1).

Throughout the interviews, amicable settlement and negotiation were used synonymously.

Parties attempted negotiations several times before any other dispute resolution mechanism was considered. Majority of the 56 interviewees admitted that at one time or the other in their experience, they had resolved a difference or dispute by negotiation.

The success of negotiation was attributed partly to the cordiality between parties to disputes. There was a culture that promoted healthy relations between parties and encouraged settlement. Though this culture was extra-contractual, its effect on dispute resolution was visible. But the pervasive use of negotiations was not only due to its effectiveness but also lack of knowledge and training in the use of other DRMs (see section 7.5). CPW 5 commenting on the widespread use of negotiation stated as follows:

So once that works for us now why not use it because if you go to try something else and you don't know much about it... but we must also be frank that may be we need more training to deal with these things. More exposure should be given to people who handle projects regarding some of these other opportunities or other alternatives. I don't have the alternatives. If I have it, probably I may want to use it, but so far as negotiation is working for us I think we can use it.

Again, negotiations were not always cordial. The cooperation that characterized negotiations sometimes gave way to brinkmanship. There were instances where parties resorted to threats when negotiations over disputes became difficult and intractable. Recounting his experience with an on-going project, CPR5, for instance, stated as follows:

The contractor is still not satisfied, so it has written for a final decision on the matter before it goes to arbitration. So we are preparing that final decision to be given to MOFEP to convey to the contractor our position. If they are still aggrieved, then they can go to arbitration. The contractors are also very careful. Sometimes, their resorts to arbitration are threats, not real. They may not carry it out because there are other issues. Negotiations may border on the issues at stake but there could be other external issues to be discussed at that high level. What is the next step from here? You are in this country to do business. Is it the end of story? The contractor may be implored to consider other assistance he has received from the State previously, the future opportunities. These factors may also come into play outside the technical issues to arrive at an amicable resolution; if those [implorations] fail, then of course arbitration. Usually when negotiations involving foreign contractors and representatives of the Employer broke down, the next step was international arbitration.

7.4.1.3. *International Commercial Arbitration*

International commercial arbitration (ICA) was the preferred choice of dispute resolution for foreign contractors (see sections 4.4). The absence of a database and issues of confidentiality made it impossible for an accurate quantitative assessment to be made of how many disputes ended up at international arbitration each year. For similar reasons it was difficult to have an overall picture of what kinds of disputes often ended up at ICA or how much, in terms of cost, the Employer had incurred in participating in ICA proceedings. Again, there was no database on how long these cases took to resolve at ICA. This study therefore relied on the qualitative data obtained through interviews to address some of these issues. The result of the analysis of the data on the sub-category called ICA is divided into five parts namely: (i) selection and use of ICA by parties; (ii) cost and ICA; (iii) delay and ICA; (iv) perception of bias versus playing victims; and (v) other perceptions.

7.4.1.3.1. *Selection and use of ICA by parties*

Factors which influenced the selection of DRMs have already been presented under section 7.3.2.3. For ICA, the primary factor accounting for its use was funding requirements. Questions were hardly raised about the suitability or otherwise of ICA as a dispute resolution mechanism. This outcome was in keeping with the observation of Capper and Bunch (1998) that suitability of ICA is hardly examined by parties using the mechanism. Asked whether the

Employer considers the suitability of ICA for specific projects during contract negotiations, CPA 5 responded as follows:

[I]f we don't accept international commercial arbitration (ICA) which one will we do [accept]. That is also another problem if we say we don't want ICA, which one do you want and if you are not ready with something like that then why would you go and stick out your neck (CPA 5).

Regardless of the nature of the transaction in question, ICA remained a constant part of most Conditions of Contract. During contract negotiations, the issue for negotiation was not whether ICA was suitable but where the arbitration was to take place, the number of arbitrators and how they were to be appointed, and the institution to administer the arbitration (see section 7.3.2.3).

7.4.1.3.2. *Cost and ICA*

The literature pointed to cost of ICA as one of the generic concerns about the dispute resolution mechanism (see section 4.4.1). For an Employer with a relatively small economy which relied heavily on external funding, the cost of ICA was an important issue. Fifteen interviewees with personal encounters with different ICA processes shared the view that ICA proceedings were expensive. CPA3 had been involved in at least four major international arbitrations and his verdict on the process in terms of cost was that, *'they were all very expensive'*. CPA4, who had also been involved in a number of arbitrations opined as follows:

they will say they need a neutral ground so we have to go to UK or some western country and because their laws are different we need to engage a lawyer there and you know, it's not easy; it's expensive.

CPA5 in a similar situation as the earlier interviewees stated, *'I mean we are in all sorts of arbitrations and they are so expensive'*. CPE5, an engineer with experience in ICA commenting on the cost stated as follows:

Typically it is supposed to take three arbiters and then (you pay them). These are international lawyers that you are talking about, international judges... they were thus expensive. You go and hire all those venues so it was expensive... Our lawyers in London were doing all those things and were passing them [the cost] on to us; huge costs.

CPR1 also asserted,

[i]international arbitration is very expensive. All the hype about cheaper resolution at arbitration is unfounded. As a party, you may end up paying administrative cost which may be able to settle the dispute itself.

Costs associated with ICA identified by interviewees included lawyers' fees, arbitrators' fees, cost of venues for arbitration and other administrative costs. There was also the cost of travelling, accommodation and upkeep of representatives of the State and witnesses. Attempts to get specific figures on spending regarding international arbitration were unsuccessful. As an indication, figures from MOFEP revealed that between May, 2007 and February, 2010, the Employer paid nearly US\$ 2 million as professional fees in a single construction arbitration involving the State. The views on cost of arbitration indicates that Asouzu's (2001) findings regarding the cost of ICA in Africa still remain true nearly a decade and half on.

However, there were no indications that the issue of cost was considered (as a matter of policy) during contract negotiations. For instance, when asked if cost was one of the factors considered during contract negotiation, CPA 1 responded as follows:

'We don't really think of the costs when it comes to going to the arbitral tribunals. Then we realize that this thing is expensive, because arbitration is expensive. But you don't think about it when you are drafting your ... [interviewee begins a new sentence] May be now we will.

7.4.1.3.3. *Delays*

ICA was slow and time consuming. The views of four interviewees in particular (three from the Employer's side and one adjunct professional representing a foreign contractor) sum up the general view of other interviewees on ICA and delays. When asked about some of the challenges with ICA in practice, APB1, currently representing foreign contractors involved in construction arbitration, stated as follows:

International arbitration is not fast, it's not quick...If anybody said it was going to shorten the dispute, the person lied. It is not. We are doing one and we've been pleading for two years. Pleading will close in 2013. We are addressing the arbitral panel next year. Now if that case had gone to trial in Ghana, we would have been done with the High Court hearing in a year or two but pleadings are not going to close till next year and the first hearing is in [month withheld] next year. So you would realize that... arbitration seems to get all the attention. But it is time consuming and it is expensive.

In the experience of APB1, litigation in Ghana compared favourably to ICA as far as speed is concerned. Another interviewee, CPE 1, currently involved in international arbitration at a destination in Europe intimated that just preparations for hearing at the arbitration alone have taking two years. CPE5 asserted that an ICA process in which he was involved took over ten years to complete. Asked why this was the case, CPE 5 responded as follows:

Because that is the sheer time they just take, I mean you go and book an appointment, you arrange to meet and it is not typically saying we will meet at 9:00am; we will meet in three months' time, we will meet in five months' time, that kind of thing. They have all the time in the world that they want.

According to CPA 3, none of the four international arbitrations he was involved took less than two years to complete. So he wondered, *'what is there about arbitration that people think is better than litigation? And it is the same long processes'*.

7.4.1.3.4. *Perception of Bias versus Playing Victims*

The interviews were replete with different expressions of how unfavourable and unsuitable ICA had been to the cause of the Employer over the years. For some interviewees, the Employer had a culture of losing ICA and this made it unsuitable. For instance, when asked about the effectiveness of ICA as a dispute resolution mechanism for the Employer, CPA5, a dispute resolution professional with the Employer observed as follows:

It [ICA] hasn't helped us all these years. It hasn't helped us. It has only wasted plenty of money. I don't really see who it is benefitting, apart from paying all that the people [the contractors] say we owe them all the time. Then we have to pay the arbitrator's fees. We have never won any substantial...[interviewee begins a new sentence] Only grand total of one I remember we have won properly so to speak. Which one else have we won? I can't remember which of them we won. Being within the ... [name of entity], I keep hearing of them most of the time. They are still on-going. CP what did we get? We just got huge sums of money [debts]. We didn't win any substantial victory. The people rather got money out of us.

Although from other interviews, the government had won some previous cases on arbitration, the views of CPA 5 conveyed the frustration with the consistent poor performance of the Employer when it comes to international arbitration. If ICA was meant to achieve a fair and balanced dispute resolution, then in the experience of many interviewees affiliated to the Employer, this was not the case (CPR3 and CPR8). CPR 3, recounting his own experiences

with two ICA hearings, concluded that the process was aimed at embarrassing the Employer and persons affiliated to it. He remarked as follows:

People who come there (Arbitrators) have already made up their minds; you are only wasting your time travelling all the way there and so on. You are wasting your time; they've already made their minds.

The above narration on perception of bias essentially confirms the findings by Asouzu (2001) that there is a strong perception that ICA does not favour African States.

But there were contrary views which attributed the perennial lack of success in ICA proceedings to the Employer's ill-preparation. These views, championed by CPW11 and APL, asserted that regardless of the generally negative perceptions against ICA, it still had positive sides to it. They argued that as compared to the other mechanisms such as litigation, arbitration was swifter and less costly depending on how it was conducted. In their opinion, the problems that the Employer had with ICA stemmed from lack of knowledge and expertise and ill-preparation. To them, the perception of bias held by many was a reflection of the culture of 'victim play'.

7.4.1.3.5. Other Perceptions about ICA

Beyond the issues of cost, delays and perception of bias, it was found that contractors who served notices of arbitration and pursued their disputes using international arbitration were more likely to be excluded from future government contracts than others. In such cases, ICA came across as ultimately destroying relationships. There were also indications that involvement in ICA was viewed as bad international publicity for the State. It exposed the country to ridicule and served as a disincentive not just to contractors but to investors seeking to do business in Ghana.

7.4.2. DRMs Rarely used

There were other DRMs agreed by parties which were rarely utilized in practice. Examples of these DRMs are DABs, mediation and Expert Determination.

7.4.2.1. *Dispute Adjudication Boards*

DABs were introduced to the Ghanaian construction industry through the World Banks' use of the FIDIC Red book, 1999. Though there was evidence that this FIDIC Condition of Contract was in use in Ghana as far back as 2004, knowledge of DABs was sparse and superficial. When asked whether in his experience his organisation has used the DAB process before, CPR4, head of an implementing agency, answered, '*no, up to date, no*'. The responses of interviewees with other organisations to similar questions were the same. Under the construction contract signed in 2004 which incorporated provisions on DAB, the parties failed to set up the required DAB. This issue did not come up until disputes emerged and the parties' initial attempts to resolve them failed. CPR1 summed up what happened in the following excerpt:

The DAB should be set up at the beginning of the Project. But in practice, it is not often done. In the ... Project, for instance, the DAB was not set up until the Contractor exercised his rights to terminate. The danger with the DAB not being set up at the beginning of the project is that, the DAB did not have the opportunity to deal with emerging disputes. Eventually, the parties agreed to set up the DAB. However, before this was done, the disputes were settled.

The story of CPR1 was corroborated by CPR 10 who was involved with the project in issue. Three reasons were offered for the rare use of DABs. Firstly, the DRM is relatively new. Knowledge on how it operated and its advantages were now being acquired by parties. Secondly, failure to set up DABs on projects which agreed to use them was attributed to sheer inadvertence on the part of officials with that responsibility. Therefore, it took some further prompting to get the DABs set up.

Finally, the few occasions on which the issue of setting up the DAB had come up, parties, especially contractors had been reluctant to do so. Spending on the board prior to the occurrence of any dispute has been a difficulty for most contractors. APE cited an instance involving a Government agency where a three-member DAB set up at the beginning of the project was disbanded after two site meetings. The foreign contractors (a joint venture)

responsible for the board's expenses objected to further attendance by the DAB, insisting that there was no need. It is worth noting that there was no indication at all of the use of Dispute Review Boards in the construction industry in Ghana. However, there was evidence of regular use of adjudication but this was in relation to minor domestic contracts.

7.4.2.2. *Expert Determination/Independent Experts*

Few agreements were sighted which mentioned expert determination as an intermediary process before ICA. Apart from one agreement from the road sector, most of the discussions on the use of expert determination related to the energy sector. Interviewees from the sector confirmed the use of expert determination (sole experts/independent experts). CPE 2, for instance, attributed the use of sole experts to the specialised nature of the subject matter of agreements in the energy sector and the fact that issues for resolution were often of a technical nature and thus required someone with a specific expertise.

On how often this DRM was used, only CPE1 attempted to volunteer information on the subject. The interviewee indicated that a sole expert has been used only once during the last decade by the Employer. For reasons of confidentiality, details of this singular experience were not disclosed.

7.4.2.3. *Conciliation and Mediation*

Negotiation, mediation and arbitration were by far the best known DRMs in Ghana. Mediation and arbitration had received statutory endorsement under Act 798. However, unlike negotiations and arbitration, mediation and conciliation were rarely used in the construction industry in Ghana especially in relation to major projects. Most of the construction agreements sighted did not expressly name mediation and conciliation as DRMs to be used. There were three instances encountered where mediation and conciliation were attempted. Firstly, CPR 4 recounted a situation where EU appointed conciliator was able to resolve disputes which had emerged between parties to an EU sponsored project in Ghana. This was

because the EU Conditions of Contract which the parties had utilized listed conciliation as one of the dispute resolution mechanisms. CPE 5 also narrated his experience with mediation of a dispute which arose from a \$120 million dollar project involving a State agency and a well-known international equipment supplier. He observed as follows:

They sued us [commenced arbitration against the agency] and we also put in a counter-claim. After negotiations, the case went to arbitration. When we got to arbitration they decided that we should go and do mediation. So we started with mediation but we did not get very far because when we started all the parties held entrenched positions and nobody wanted to move so we stopped and went back to arbitration.

Series of mediations took place in London, Brighton and New York but were unsuccessful. Therefore, the parties returned to ICA. The final example of mediation related to the *Waterville Case* (see section 7.3.2.4). A company which had its construction contracts abrogated six months into the transaction by the Employer invoked the mediation clause in the agreement. The parties agreed to appoint a local mediator to help resolve the disputes. The mediation was successful. However, the Supreme Court subsequently declared the construction contract in issue void on grounds of unconstitutionality thereby impliedly rendering the mediation process a nullity (see section 8.4.3).

Notwithstanding these examples, the use of mediation in the industry was rare. The views of some individuals involved directly with dispute resolution in the construction industry were generally dismissive of the use of mediation and conciliation. In their opinion, conciliation and mediation were mechanisms often used when dealing with worker's rights and not major construction disputes. The following statement of CPA1 exemplified this view:

Conciliation and mediation normally are things that are used when you are dealing with persons; when you are dealing with workers. When you are actually dealing with contracts - the types that you are looking at - we don't use those things. I have never seen those mechanisms here [in Ghana] unless you have a portion that deals with how to deal with workers' rights and things like that. But when it comes to the actual construction contract and the terms in there and issues that you have to deal with, invariably, the dispute resolution mechanisms are those in the FIDIC. We use the FIDIC dispute [resolution] format. So invariably conciliation and mediation they don't really play (CPA1).

Elaborating on the above statement further, CPA 1 added:

Can you imagine doing mediation in respect of a dispute we have on a road that a contractor had messed up? The terms of his contract have not been dealt with [he has not complied with the terms of his contract] and then you say you are going to mediation? The most we can do is to negotiate. If you negotiate and it doesn't work you go straight to an expert and from there international arbitration, but conciliation and mediation in construction, I don't know. I don't think, because you need somebody to come to a conclusion and tell you that this is it. The non-binding, I am not comfortable with that when it comes to construction (CPA1).

Another interviewee, CPA 4 described the general approach to dispute resolution in relation to infrastructure projects as excluding the intermediary mechanisms such as mediation and conciliation. CPA4 observed as follows:

It depends on the language and the text [construction contract]; if the Agreement does not say so and invariably most of them that I have seen they start with good faith negotiations and if those negotiations fail, they go to full blown arbitration. Most of them don't use the intermediary steps; it is not that common, you don't see it.

Some interviewees such as CPA5 and APC wondered which experts in the country had capability to handle complex construction conciliation or mediation. They doubted if the foreign parties would be willing to use conciliation and mediation to resolve disputes which involved substantial sums of money.

From the analysis, it stood out that amicable settlement was not considered as signifying or pointing to the use of mediation or conciliation or any other intermediary mechanism; it was all about negotiations. Dated views regarding the use of mediation and conciliation as DRMs for minor disputes were prevalent. A statutory change equating settlements resulting from mediation to arbitral awards (see section 82 of the ADR act, 2010, Act 798) was still yet to change perceptions even among practitioners.

7.4.3. *DRMs not agreed by Parties but in use*

There were two categories of DRMs which were found to be in use even though parties did not expressly agree to use them. These were litigation and what is referred to here as informal resolution mechanisms. How litigation was used in the context of infrastructure related construction dispute resolution in Ghana has already been discussed under sections 7.3.3. The use of informal resolution mechanisms took the form of intervention by political officeholders

in the resolution of disputes. These interventions sometimes took the form of playing informal mediatory roles ('pseudo-mediation'). The practice of resorting to informal resolution mechanisms has been discussed under section 7.2.2.2. This multifarious resolution process was unregulated, often behind closed doors and therefore difficult to assess. They were not captured in any literature or report. The quality of such resolutions was difficult to gauge as they were often not based on the merits of the parties' cases. Figure 7.4 below provides a summary of all the DRMs discussed above.

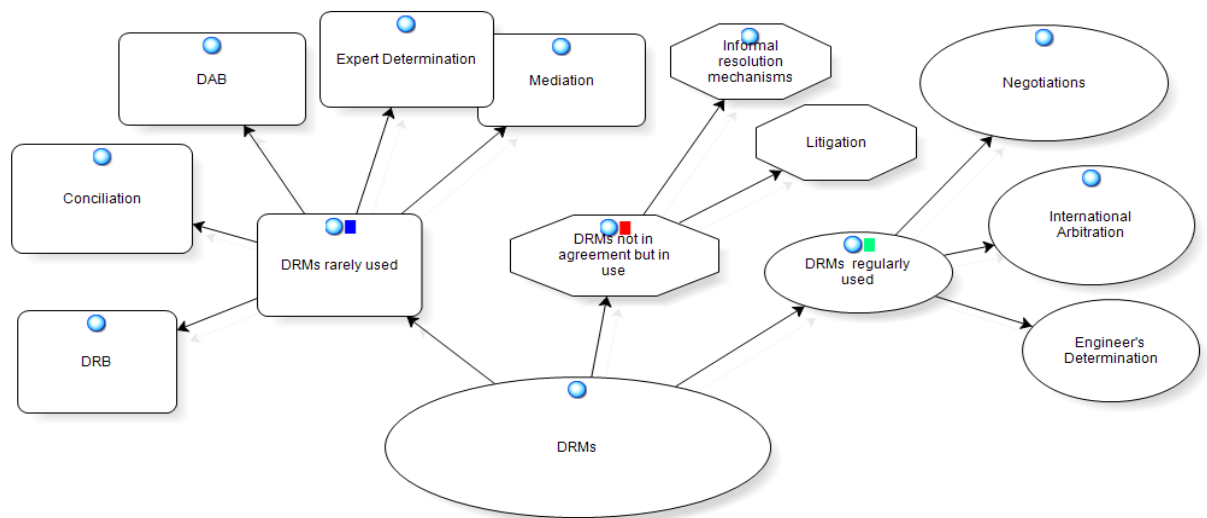


Figure 7.4: Dispute Resolution Mechanisms in use (Source: Field Data)

Significantly, the three DRMs regularly used in Ghana - the Engineer's determination, negotiations and ICA - were the same as the DRMs stipulated in the Conditions of Contract commonly used in the industry, namely the FIDIC Red book, 1987. The implication is that parties generally stuck to DRMs they agreed at the beginning of their contractual relationships. Again, nearly a decade and half after the replacement of Engineer's determination with DABs under the FIDIC Red book, 1999, parties involved in construction-related infrastructure disputes in Ghana had not made that transition yet.

7.4.4. Procedure for Dispute Resolution

This section focuses on the procedure for dispute resolution prior to reference to ICA. When disputes arose, the first point of call was the Engineer (see section 67 of the FIDIC Red book 1987). The procedure regarding how engineers handled such disputes until a determination is made is outlined under sections 7.3.6 and 7.4.1.1 above. Where the Engineer's determination does not resolve the dispute, representatives of the implementing agency concerned would invite the representatives of the contractor to a series of meetings aimed at resolving the pending dispute. When the initial meetings showed promise of settlement, the process proceeded until a resolution was reached or disputed issues were narrowed.

There were instances where discussions between the Employer's representatives and contractors broke down very early due to entrenched positions. In such cases, contractors proceeded to serve Notice of Arbitration. Where contractors were amenable to further negotiations with higher officials of the Employer, additional negotiations ensued between teams of the Employer and contractors prior to any engagement at ICA. Depending on the nature of the dispute, the Employer's team was constituted by a combination of experts from the sector ministry responsible, the implementing agency involved (the Employer's representative), the A-Gs, MOFEP and funding organisations. Implications of the involvement of multiple organisations in the dispute resolution processes are discussed in chapter eight.

Post-notice of arbitration negotiations often took place at the behest of the A-Gs. CPA 4 described the procedure in the following excerpt:

Once it [the dispute] is starting I think the MDAs do try to engage the contractors; they try to see if they can settle but if the contractors are being difficult and are making some outrageous demands then they [MDAs] will say okay you go ahead and do whatever you want to do. Then they will call their bluff. Yes, so the Contractor will then proceed to the tribunal by filing the notice of arbitration. They will serve them [the MDAs] and then they will bring it [Notice of Arbitration] to the [A-Gs] and

we will try and do some ... we will write to them [the contractors] and tell them maybe, we want to look at it [the dispute] again, take a second look at it as lawyers or that government has mandated us to look at the thing [dispute] and see if we can settle the matter instead of going through the arbitration. In such cases, a team will be set up and then we will try and see if we can resolve it.

The general dispute procedure presented in this study varied depending on the nature of the dispute, the contractor involved and the MDAs responsible. Regardless of the dispute procedural route taken, negotiation was the last step before full blown ICA. Figure 7.5 below captures the different procedural routes currently in regular use.

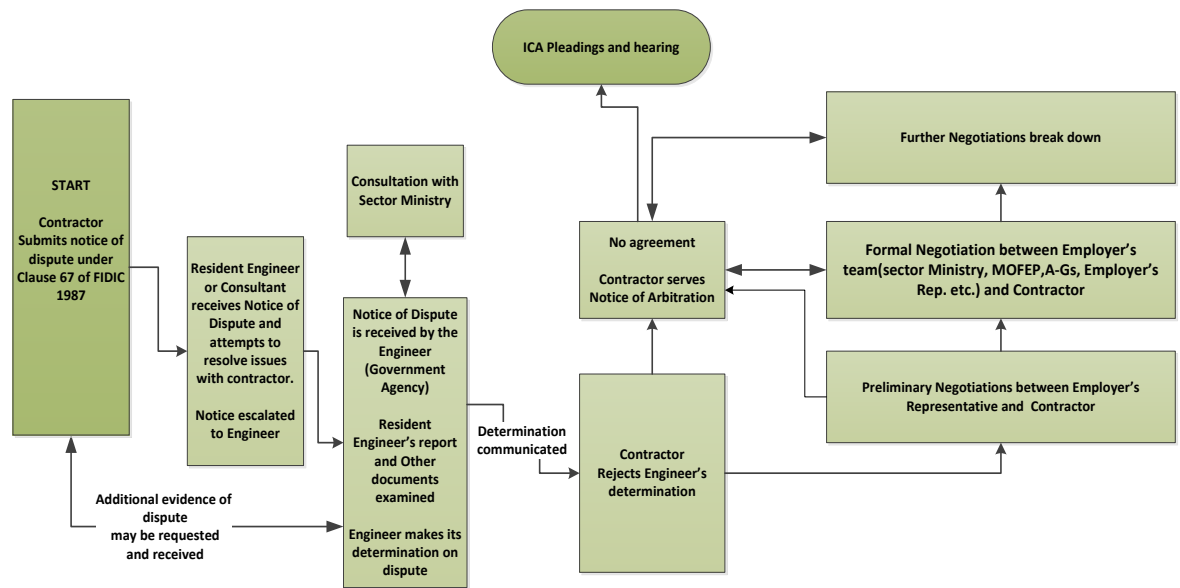


Figure 7.5: Dispute Resolution Procedure (Source: Field data)

Using an adapted version of the dispute resolution step by Groton (1992) and Cheung (1999), Figure 7.6 illustrates the dispute resolution trajectory as discussed in this chapter. Intermediary mechanisms did not play a substantial role in the resolution process.

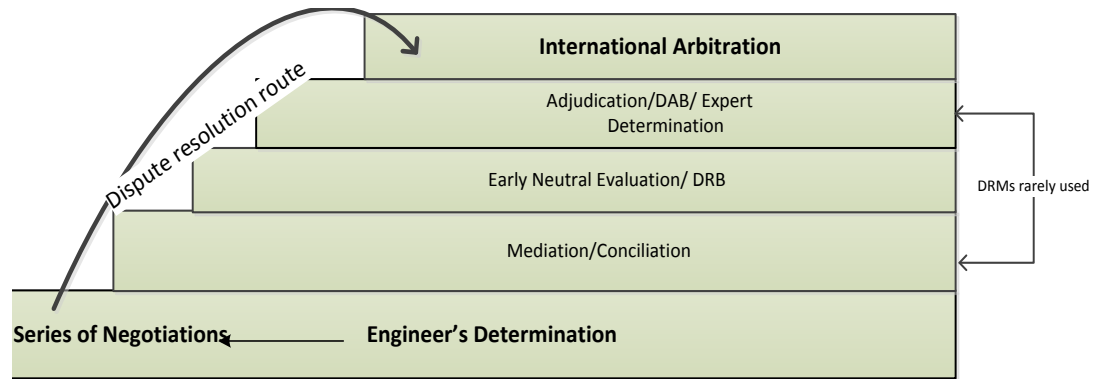


Figure 7.6: Dispute resolution Route (Source: Adapted from Groton (1992) and Cheung (1999) based on field data)

7.5. Barriers to the Use of Alternative Dispute Resolution Mechanisms

Factors identified as inhibiting the use of intermediary DRMs in Ghana were categorized into three classes namely, Employer-related, contractor-related and generic factors.

7.5.1. Employer-related barriers

In all, ten inhibiting factors directly associated with the Employer were identified (see Figure 7.7 below). Five of the ten factors namely the Employer as a single largest client, the threat of blacklist, lack of institutional cooperation, lack of expertise and sticking to old mind-sets have already been examined (see sections 7.2.1.3, 7.2.2.1, 7.2.2.2 & 7.4.2.3). Details of the other five inhibiting factors namely lack of policy and guidelines on use of DRMs, lack of stance on alternatives to ICA, public suspicion, failure of political leaders to take responsibility for settlements and poor record keeping are now presented.

Firstly, the Employer had no policy and guidelines on the use of DRM on infrastructure-related construction disputes. At the general level, Act 798 was passed to replace the Arbitration Act, 1961 (Act 38). Although section 135 of the Act defined ‘Alternative Dispute Resolution’ as ‘*the collective description of methods of resolving disputes otherwise than through the normal trial process*’ only arbitration, customary arbitration, mediation, and conciliation received attention. Apart from arbitration and mediation, none of the construction

specific DRMs such as adjudication, DAB and Expert determination were specifically provided for in Act 798. Again, there are no guidelines on the use of ADR by public institutions. On the contrary, section 1 of Act 798 exempt disputes relating to subject-matters of public and national interest from its purview (Mante and Ndekugri, 2012). Ten interviewees from entities representing the Employer admitted that there was no specific policy or guideline on the use of ADR by public institutions in Ghana. For instance, when asked about the existence of such a policy, CPA 3, an experienced dispute resolution practitioner with the Employer responded as follows:

No, not that I know of. Normally when you have a file and you think this is how I want to go about it, you may put up a written memo to the AG, 'this is what I want to do and I think we can resolve this in this way'. So it goes up to the Solicitor-General, to the AG and if they are okay with it, it will come back to you that go ahead so that is normally what happens. We don't have any policy guideline that you have to do a, b, c. It has not really been done.

Whilst CPA 1 was of the view that such a policy was not the responsibility of his organisation, CPR1 thought such a policy was not necessary. Dispute resolution as far as CPR1 was concerned should be governed by precedent. However, other interviewees such as CPA 3, CPA4, CPR4 and CPA5 were of the view that there was the need for such guidelines.

Recounting his experience with the use ADR, CPF1 observed as follows:

The AG attempted to settle some of the disputes so that we don't go through the expense but maybe we are all learning now. May be what we are to establish are proper guidelines for settling any matter... With the benefit of hindsight now it is very important that the case is made for the establishment of guidelines and procedures... There is a need for the establishment of clear, well defined workable guidelines for executing or administering ADR that did not go to the formally instituted bodies but are done through conciliation and negotiation outside the formal forum. So that there will be no allegations of bias and suspicion of corruption. Because when we were doing this things [negotiations], when they brought the thing for me to comment, I was doing it on top of my head, what I knew as the policy. But now we are ... [interviewee states consequences of the steps taken] because some people have alleged that there was bias, collusion, and so on. But if we have had clear guidelines and a checklist provided for reviewing such steps then we would have been seen to have gone through all those at least. So that there will be no suggestion of collusion in resolving this matters.

The above excerpt illustrates some of the difficulties public officials seeking to use ADR encountered in the absence of guidelines.

Secondly, the absence of clearly outlined guidelines for the use of ADR had also heightened public suspicion regarding the use of ADR by workers of the Employer. Data collection for this study coincided with a period of intense public outcry over debts that the Government had incurred as a result of judicial decisions and arbitral awards against it for various breaches (Daily Graphic, 2012; Daily Graphic, 2013). As part of these discussions, many including Parliament questioned certain settlements that the Government had reached with some construction companies (see Parliament of Ghana, 2012). CPA1, CPA3, CPA4 and CPF1 variously observed that it was frustrating to use ADR in cases involving the Employer because of public suspicion of corruption and collusion. There was less suspicion when disputes were resolved by the courts or through international arbitration.

Thirdly, closely linked to the issue of public suspicion was the failure of key public officials to take responsibility for settlements resulting from ADR use. Interviewees avoided using ADR in practice because political superiors sometimes failed to take responsibility for dispute settlements arrived through ADR methods which they had authorised. There were instances where public officials giving evidence before the Public Accounts Committee of Parliament attempted to dissociate themselves from settlements reached, creating the impression that the use of ADR was improper (Parliament of Ghana, 2012).

Furthermore, the data analysis revealed a culture of poor record keeping. Records on transactions were not properly kept and correspondences were not filed. The problem of poor record keeping was widespread and systemic. Interviewees cited examples where use of ADR had been thwarted by lack of information on transactions in dispute (CPA4, CPA3 and CPR5). For instance, CPA4 described the state of record keeping at the various MDAs as '*woefully inadequate*', '*porous*' and '*terrifying*' and observed that in some instances, the Employer's lawyers had to attend negotiations without the full complement of records of the transactions. Invariably, contractors attended such settlement meetings with up to date

records. Figure 7.7 below provides a visual summary of the Employer-related barriers to the use of DRMs discussed above.

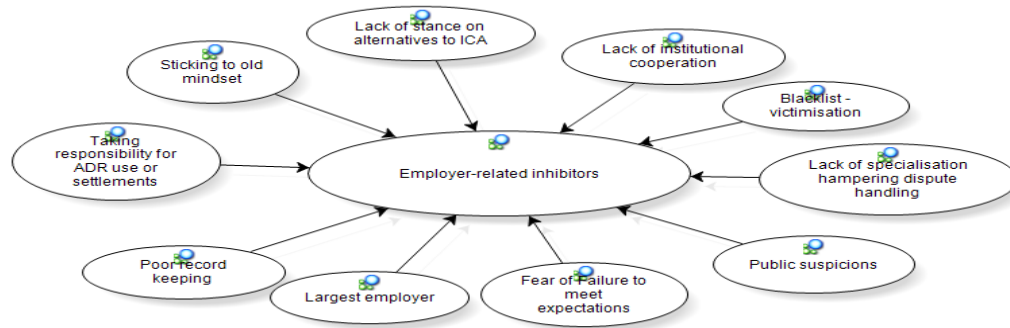


Figure 7.7: Employer-related Barriers (Source: Field data)

7.5.2. Contractor-related factors

For many contractors, avoiding any form of dispute with the Employer was the natural response to the threat of blacklist. When disputes arose, the initial option was to resolve amicably. For those who were involved in many projects or were entertaining the possibility of securing future jobs from the Government, the strategy was that they served all required notices, kept up-to-date record or evidence in support of claims, and continued to negotiate with the Employer. In some cases, such lingering claims became bargaining chips for new contracts. Even foreign contractors who were exposed to the workings of ADR such as mediation in the construction industry elsewhere did not use such mechanisms.

7.5.3. Generic Barriers

Six generic inhibiting factors of ADR were identified from the data in addition to the party-related barriers. These were: (i) the knowledge gap; (ii) the adversarial culture; (iii) Negative perceptions/ Trust deficit for ADR; (iv) lack of ADR infrastructure and expertise; (v) lack of information on use of ADR and success rates; and (vi) the extra expense argument. The data on lack of ADR infrastructure has already been presented under section 7.3.3. These factors are examined separately below.

Firstly, lack of adequate knowledge of the various DRMs was pervasive. Promotional activities largely centred on three main mechanisms namely Arbitration, Mediation and Negotiation. These promotions were led mainly by private groups and the judiciary. Court-annexed ADR processes have been incorporated into the High Court (Civil Procedure) Rules - C.I. 47. Consequently, judges at the commercial division of the High Court engaged in court assisted mediation. Even so, lawyers were ill-prepared when it came to the use of ADR. APB1 speaking of the knowledge of legal practitioners of ADR observed as follows:

Let me say that the level of understanding of ADR even by the Ghanaian lawyer is a bit behind time so sometimes, it even depends on the firm that they [contractors] choose because it's the firm that might come out to say, you know what, don't just rush into arbitration, have this or the other as a pre-condition.

Training and promotional activities regarding the use of ADR to resolve construction disputes were championed by professional bodies such as the Ghana Institution of Engineers (GhIE) and the Ghana Institution of Surveyors (GhIS). However such activities also concentrated mainly on the use of arbitration and contractual adjudication. APL, APT and APN, interviewees with extensive experience in ADR teaching and practice were united in their view that the problem of lack of use of ADR in the construction industry was due to lack of sufficient knowledge of the range of dispute resolution mechanisms.

No database on the use of ADR mechanisms in the construction industry existed. No known information existed on how often parties used ADR to resolve disputes from major projects and the success rate. Parties to major projects could be encouraged by statistics pointing to savings that others have made in using ADR, but this information did not exist. The main reason proffered for the absence of a database was the issue of confidentiality and privacy.

Secondly, the adversarial culture of the construction industry also acted as a barrier to the use of ADR. There were instances where parties indicated that they litigated or arbitrated just to prove a point. On this issue, CPR9 narrated his experience in the following words:

I have known cases where you sometimes see that the contractor has put in a very bad case and if he is to take it up further it could result in him falling out of the project. So we go down that lane, for want of a better word, to make him look foolish. Others avoided non-adjudicatory dispute resolution mechanisms because they could not trust the other party to comply with terms of settlement.

Thirdly, ADR outcomes were viewed as less authoritative than judicial decisions or arbitral awards. Whilst views from interviewees such as CPA3, CPA4, CPR 4, CPR5, CPR8, CPR9 and CPR10 supported ADR as a means of resolving construction disputes, there were others who were sceptical. For instance, CPA1 was of the view that any mechanism that will not render definitive outcome will not be useful to the construction industry.

Finally, ADR was viewed as adding a further layer of cost and time to the dispute resolution processes. To proponents of this view, ADR outcome was hardly final and were often challenged either in litigation or on arbitration. Commenting on why parties to construction disputes in Ghana did not utilize the various forms of ADR, CPA4 and CPE1 observed that time spent on negotiation, mediation, dispute review boards and the other intermediary mechanisms constituted additional time that will invariably be spent on a binding process. Consequently, such processes merely prolonged the process of dispute resolution.

7.6. Summary

This chapter has reported on the findings of this study as encapsulated by the themes ‘features and context of parties to the dispute resolution processes’, ‘Procurement’, ‘the dispute resolution processes’ and aspects of the theme ‘consequences’. Regarding the theme on the nature and context of parties to infrastructure-related construction disputes, it was found that the main parties were the State and its agencies (the Employer) and Foreign Contractors. The Employer emerged as a complex entity which executed its actions under

construction contracts through its agencies (sub-units). Each sub-unit is assigned a unique role by law. The Employer's performance of its obligations under construction contracts required cooperation among its sub-units and coordination of their activities. This was often a challenge as the unduly lengthy consultations and approvals led to delays in decision-making and, in some cases, inefficiencies. Problems of the Employer were further exacerbated by contextual factors such as human resource deficiencies, lack of specialisation, political interference and the fear of blacklist held by contractors. Foreign contractors were often cautious of how future dispute were to be resolved. They preferred international arbitration because it offered them the options of neutrality, fairness and enforcement beyond the jurisdiction of the Employer.

The legal framework for the resolution of infrastructure-related disputes was based on contract. Funding for projects was accompanied by a requirement to use particular Conditions of Contract which contained clauses on how disputes were to be resolved. Parties were required to make their dispute resolution choices within the parameters of the dispute clauses in the General Conditions of Contract and this was usually influenced by the nature and the context within which the transactions took place. It was also found that the Employer neither had guidelines for this process nor considered challenges with previous dispute clauses during negotiation of new ones.

On the mechanisms for dispute resolution, it was found that parties regularly used engineer's determination, negotiations and international arbitration. They rarely employed intermediary mechanisms such as DAB, Expert determination and mediation. Some of the reasons for the lack of interest in intermediary mechanisms identified included lack of adequate knowledge of these mechanisms, lack of policy direction and guidelines for their use, negative perceptions about the use of ADR and the threat of blacklist. Intervention by

politicians and litigation were examples of DRMs which parties did not expressly incorporate into their contracts but which were in use.

CHAPTER EIGHT

CHAPTER EIGHT - DISCUSSIONS: IMPLICATIONS OF RESULTS AND REMEDIAL STRATEGIES

8.1. Introduction

In this chapter the results of the data analysis reported in the preceding chapter are discussed. The chapter explores the consequences of the extant dispute resolution processes, peculiar obstacles preventing efficient and effective resolution of disputes in the context of major infrastructure construction and how such obstacles can be remedied. From the results of the analysis, it can be deduced that the process of dispute resolution in the context of major infrastructure construction projects in Ghana is a product of the interaction between the major parties and the context within which they operated. The remedial strategies therefore took account of the factors associated with the parties and their context which negatively impact the extant dispute resolution processes and proposed ways to improve them.

8.2. Evaluation of the extant dispute resolution processes

From the results of the data analysis, some of the problems that the extant dispute resolution processes encountered included limited use of intermediary mechanisms (see section 7.4.2), cost of dispute resolution (see section 7.4.1.3.2), delays (see section 7.4.1.3.3) and party dissatisfaction with resolution outcomes (see section 7.4.1.3.4). A dispute resolution process may be adopted for several reasons including speed, cost reduction, preservation of relationships, confidentiality and parties' satisfaction with the outcome (Cheung, 1999; Gaitskell, 2006; Ndekugri *et al.*, 2009; Blake *et al.*, 2011). Its efficiency and effectiveness has to be assessed relative to the extent to which the process achieves the desired goals (Tyler, 1988). Evaluating a dispute resolution process against these party expectations can be difficult since most dispute resolution systems and procedures are not explicit on the precise objectives parties have for establishing them.

However, the literature does provide some indicators for judging the efficiency of a dispute resolution process (Constantino and Merchant, 1996; Smith and Martinez, 2009). Brett *et al.*

(1990) captures sufficiently the key evaluation criteria for an efficient and effective dispute resolution process found in the literature. They outlined four factors which must be considered when evaluating dispute resolution processes within an organisation:

- (i) **transaction cost** - This is not just about money, but time and emotional energy expended on the resolution process, the opportunities lost and resources wasted;
- (ii) **satisfaction with outcome** - This has two dimensions; firstly, the extent to which parties' interests (needs, concerns and desires) has been catered for and secondly, the extent to which the parties consider the extant system as being fair;
- (iii) **effect on relationships** - The long term outcome or effect of the dispute mechanism in use on the parties' future relationship; and
- (iv) **reoccurrence of disputes** - This can take three different forms – same disputes, same parties; same dispute, different parties and different disputes, same parties.

Although Brett *et al.* (1990) provided these evaluation criteria in the context of dispute resolution systems within organisations, they are useful in the context of this study as well because the principles underlying the criteria presented entail key objectives for many a dispute resolution process including those used in the construction industry.

In addition to assessing the efficiency of dispute resolution processes from the perspective of the results they produce, other studies have focused on the elements of a dispute resolution system which may signal the existence of an efficient and effective process. Smith and Martinez (2009) have synthesised the principles from various dispute and conflict resolution models (see Conbere, 2001 for a review of the models) into six key features that should be present in every effective and efficient dispute resolution system. These are as follows:

- (i) availability of multiple DRM options including both right-based and interest-based options;
- (ii) freedom to move back and forth between the interest-based options and the right –based options;
- (iii) substantial involvement of stakeholders or parties in the design of the system;
- (iv) voluntary participation, confidential process and the involvement of third party neutrals;
- (v) transparency and accountability; and
- (vi) education and training of stakeholders on the use of the system (Ury *et al.*, 1988).

The elements of an efficient dispute resolution system (Smith and Martinez, 2009) and the criteria for assessing the output of such system (Ury *et al.*, 1988) outlined above are merged

into a common framework for evaluating the effectiveness of the extant dispute resolution processes. How do the extant dispute resolution processes measure up to the elements of an efficient dispute resolution process identified above? How do the outputs of the extant dispute resolution processes measure up in terms of transaction cost, impact on relationships and satisfaction with outcomes? The following sub-sections examine the results of the data analysis on the extant dispute resolution processes in the light of the elements of an effective dispute resolution process identified from the literature. The evaluation begins with the features of the dispute resolution system and concludes with an examination of the outputs.

8.2.1. Availability of multiple DRM options

Although Conditions of Contract in use in Ghana invariably contained multiple DRMs, these were largely limited to the Engineer's determination, amicable settlement (construed generally as negotiations) and international arbitration (see section 7.4.1). The first and the third options (engineer's determination and international arbitration) were right-based whilst the second option, negotiation was the only interest-based option.

The dispute resolution literature from developing countries particularly, Africa provides justification for the reliance on international arbitration. Asouzu (2001) considered litigation, conciliation, mediation and international arbitration in the African context and concluded that international arbitration is the most suitable dispute resolution process. Other authors such as Asante (1998), Sempasa (1992) and Cotran and Amissah (1996) hold similar views (see section 4.2). Asouzu (2001) dismissed litigation on the basis of the lack of trust in national courts. Mediation and conciliation were dismissed on the basis that they cannot be relied on to achieve binding and internationally enforceable decisions. To Asouzu (2001), therefore, the most plausible mechanism for resolving international commercial disputes in developing countries, particularly Africa, is international arbitration. Whilst Asouzu's (2001) arguments may be cogent, his approach to dispute resolution appears to discard all other DRMs as

unsuitable. These conclusions treat the various dispute resolution mechanisms as mutually exclusive; but they are certainly not.

In the context of construction dispute resolution, the use of multi-tiered DRMs is a common phenomenon (Gaitskell, 2005; Gaitskell, 2006). There is scarcely an author on dispute resolution in the construction industry in the developed world who does not acknowledge the varied dispute resolution options available today apart from arbitration. Majority acknowledge the usefulness of other DRMs (see e.g. Fenn *et al.*, 1997; Levin, 1998; Gould, 1999; Hibberd and Newman, 1999; Gaitskell, 2005). The results of the data analysis (see section 7.4) confirm that multiple DRMs were used in the resolution of construction disputes in Ghana.

The problem with infrastructure-related construction dispute resolution in Ghana was the over-reliance on limited number of DRMs and the failure to use intermediary DRMs such as mediation, conciliation, DRBs and DABs. The implications of this failure was that most of the opportunities and benefits that the use of intermediary processes could have brought such as cost reduction, speedy settlement and parties' control over the resolution process were lost (see Blake *et al.*, 2011). Relying exclusively on negotiation, Engineer's determination and international arbitration means parties failed to operationalize clause 67 (2) of the FIDIC Red book, 1987 on amicable settlement which offered them the opportunity to explore and utilise intermediary mechanisms such as mediation, DRBs and DABs. For an Employer who was dissatisfied with international arbitration, the use of intermediary mechanisms could add additional buffer to existing efforts at dispute resolution prior to international arbitration. This would also provide the Employer the opportunity to participate in the crafting of solutions to disputes. Some right-based intermediary mechanisms such as DAB provide an opportunity for parties to assess the viability of their claims and weigh the likely prospects of success on arbitration. DABs provide the additional advantage of proximity to the physical project site

and therefore offer a real prospect of cutting down cost of dispute resolution.

8.2.2. Freedom to move back and forth between Mechanisms

There was evidence that in some instances parties had the freedom to move back and forth between the interest-based dispute resolution options namely negotiation and mediation and the right-based options (Engineer's determination and international arbitration) (see section 7.4.2.3). The issue here is that parties' options in terms of right and interest-based resolution mechanisms were limited.

8.2.3. Substantial involvement of Parties in the design of dispute system

The actual parties to major construction transactions had little influence over the process of dispute resolution system design. Funding institutions nominated Conditions of Contract for projects, which in turn, contained the dispute clauses (see section 7.3.2). The involvement of the actual parties to construction contracts in the selection of dispute resolution mechanisms was limited to providing project specific details to operationalise mechanisms already provided in the Conditions of Contract (see section 7.3.2.3). Very little effort was invested in evaluating dispute clauses in terms of parties' dispute resolution goals, incentives for use, the cost of operationalizing them and the outcomes in terms of expeditious results and party satisfaction (see Smith and Martinez, 2009).

8.2.4. Voluntary participation, confidential process and involvement of third party neutrals

The resolution processes were confidential but, there were issues regarding voluntary participation of parties and the involvement of third party neutrals. Fear that contractors who pursued dispute resolution processes against the Employer risked being blacklisted was widespread (see section 7.2.2.3). The implications of this phenomenon are considered under section 8.3.3.4.3. Suffice it to state that voluntary participation in dispute resolution was stifled by this phenomenon.

Regarding the use of third party neutrals, the only time that neutrals were introduced into the dispute resolution processes was at the stage of international arbitration or litigation. The Engineer was hardly a third party neutral in the Ghanaian context (see section 7.4.1.1). The implication of the absence of third party neutrals at the early stages of the dispute resolution processes was that issues festered and developed into intractable disputes before there was any opportunity for a third party to explore them objectively. Insights that early use of third party neutrals would have provided to enable parties to consider their interests, rights and options objectively were all lost.

8.2.5. *Transparency and accountability*

Further, some aspects of the dispute resolution processes lacked transparency and accountability. There were indications that some parties who failed to settle disputes through negotiations and yet were reluctant to proceed to international arbitration found solace in the use of informal mechanisms such as appealing to politicians (see section 7.2.2.2 and 7.4.3). The main challenge with the use of informal dispute resolution mechanisms was lack of transparency, formality and accountability. It was impossible to tell whether Government officials intervened in disputes for personal gain or in the national interest. It was difficult to quantify how much was lost or gained when political superiors instructed employees of the State to compromise on a dispute and settle.

8.2.6. *Education and training*

Whilst parties to major projects appeared conversant with negotiation, Engineer's determination and international arbitration, there was evidence that most of them had insufficient knowledge of other dispute resolution mechanisms such as DRB, DAB, construction dispute mediation and conciliation, early neutral evaluation and expert determination (see section 7.5.3). There were indications of sporadic training of practitioners and parties in the use of dispute mechanisms but there was lack of systematic and continuous

education and training. The implication was that parties stuck to dispute mechanisms they were comfortable with. International arbitration was handled by appointed professionals.

How did the features of the extant dispute resolution processes affect their output? Brett *et al.*'s (1990) four factors outlined earlier (see section 8.2) namely transaction cost, party satisfaction, effect on relationship between parties and the re-occurrence of disputes are used to briefly examine the outcomes of the extant dispute processes as revealed by the data analysis.

8.2.7. *Transaction Cost*

The outcome of the data analysis pointed to the existence of costly dispute resolution processes. Though quantitative data was not available to back this claim, the qualitative data on international arbitration, for instance, pointed to an expensive (see section 7.4.1.3.2) and time consuming (section 7.4.1.3.3) process. Though there were positive comments about the effectiveness of negotiation as a dispute mechanism, there were clear indications that lots of efforts and time went into the process as they were often repeated at different levels of the Employer's organisational structure. Further research will be required to determine the cost of negotiations in the context of construction dispute resolution.

8.2.8. *Satisfaction with Outcome and Party relationships*

Regarding parties' satisfaction with outcomes of the dispute resolution processes, both the Employer and contractors were satisfied with negotiated outcomes (see section 7.4.1.2). There was, however, marked difference between the satisfaction levels of the Employer and contractors in the case of international arbitration. The Employer was mostly dissatisfied with international arbitration outcomes (see section 7.4.1.3.4). The consequence of the dissatisfaction with outcomes of international arbitration was that relationships between the Employer and Contractors who used the resolution mechanism were destroyed leading to loss of future jobs from the Employer (see section 7.2.2.3).

In sum, limited dispute resolution options, lack of substantial involvement of parties in the design of the dispute resolution system, threats to voluntary participation and limited utilisation of third party neutrals affected the efficiency and effectiveness (the realisation of satisfactory outcomes and party objectives) of the dispute resolution processes. Additionally, lack of education and training of stakeholders on the use of dispute mechanisms impeded effective utilisation of the arrangements for dispute resolution contained in Conditions of Contract. Consequently, the extant dispute resolution processes were characterised by high cost (see section 7.4.1.3.2), low parties' satisfaction with outcomes (see sections 7.4.1.3.3) and destruction of relationships (section 7.4.1.3.5). To deal with the challenges of the current dispute resolution processes, there was the need to explore the factors which accounted for the existing dispute resolution processes.

8.3. Factors Accounting for the Extant Dispute Resolution Processes

From the results of the data analysis, the dispute resolution processes discussed under section 8.2 were the product of the nature of the parties involved in infrastructure procurement, the context within which they operated and their responses to the context. A number of specific factors which have shaped the dispute resolution processes were identified in chapter seven. These factors included dispute resolution preferences of foreign contractors, external funding requirements, the complex structure and operations of the Employer and the human resource problems of the Employer. Political interference, threat of blacklist and the legal framework for procurement and dispute resolution were the other factors which have shaped the existing dispute resolution processes. The repercussions of the enumerated factors on dispute resolution can be seen from three different perspectives namely, dispute occurrence, dispute resolution system design and the workings of the dispute resolution processes.

8.3.1. *Foreign Contractors and the dispute resolution processes*

The nature of foreign contractors had implications for how disputes were resolved. Unlike domestic contractors, foreign contractors were subjects of different States and did not consider themselves as natural beneficiaries of the protection of the Employer as a sovereign State. Indeed, to the foreign contractor, the Employer was an adversary, particularly in the context of dispute resolution. Consequently, having an effective and efficient mechanism for dispute resolution was an important consideration. Not only was the process required to be effective, it was also expected to be fair and neutral. Hence, the preference for international arbitration in construction disputes. This dispute resolution preference of foreign contractors was invariably reflected by Conditions of Contract nominated by funding institutions.

8.3.2. *Influence of funding requirements on Dispute System design*

In theory, employers and contractors can select, negotiate and adopt any dispute resolution process they deem appropriate (see *Photo Production Ltd v. Securicor Transport Ltd* [1980] 1All 556 at 566 HL). They may make provision for the resolution of future disputes in their construction contract or agree on a suitable mechanism when a dispute arises by entering into an agreement to submit such dispute to a particular resolution process (Redfern, 2004). Instances of the second approach are rare because at the time a dispute occurs, parties may be too incensed with each other to sit down and select a suitable mechanism to resolve that dispute. Hence, in major construction transactions involving the Employer and foreign contractors, the process by which future disputes were resolved were pre-ordered. This made the contract formation process a crucial factor to dispute resolution. Consequently, entities concerned with future dispute resolution found it expedient to influence the contract formation process. The influence of funding institutions on the contract formation process and contract negotiation has already been examined (see sections, 7.3.2.1 and 7.3.2.3). Clauses on dispute resolution in the FIDIC Red book were not the type which the parties could change at

will. Such clauses reflected choices of funding institutions on dispute resolution and could be substantially modified only with the permission of such institutions (see World Bank, 2011, p.21). Consequently, not much room was left for parties to alter the General Conditions on dispute resolution. The limited changes or additions that parties were able to make to dispute clauses were examined under section 7.3.2.3. Notably, there were no indications at all that parties provided details of what they were to do or the mechanisms they were to use during the amicable settlement period. It was therefore not surprising that in practice, the period of amicable settlement was viewed as a period for further negotiations. For the Employer, concerns with dispute resolution such as cost, speed, effectiveness of process and impact on relationships (see section 8.2) were all scarcely considered.

Dispute clauses were agreed as a matter of practice and not out of deliberate policy to address previous dispute resolution concerns or to achieve a specified dispute resolution objective. In effect, contract negotiations on dispute clauses merely served the purpose of enabling parties to agree on project specific details regarding how to implement dispute mechanisms prescribed in the General Conditions. There was limited opportunity for parties to consider the viability or suitability of other mechanisms. It was therefore not surprising that the dispute resolution mechanisms mostly used by the parties were the pre-determined options contained in General Conditions of Contracts.

Whilst acknowledging the existence of some limitations on the parties' ability to alter the dispute resolution structure prescribed by funding organisations, it is argued that parties failed to explore possibilities to improve the dispute resolution system design. The contract formation process is a creative process. As Poole (2012, p.13) noted, *'it does not merely provide the means of resolving disputes which may arise when certain events happen: it provides the mechanism whereby things can be made to happen'*. Beyond agreeing on the prescribed dispute resolution mechanisms, the institutions to administer them, venue, rules

and the governing law, parties can still do more to order the dispute resolution processes in such a way as to achieve optimal results through less costly and timely procedures without violating requirements of funding organisations (see Scott and Triantis, 2005). Parties can agree to adopt or modify existing rules regarding cost, venue, rules, and other procedures currently contributing to cost and delays.

A number of other steps can be taken to improve the quality of the dispute resolution system design. For example, during negotiations, parties can agree on how and where they will want witness statements or evidence to be taken even though the seat of Arbitration may be elsewhere. Parties can also agree on issues of cost and determine how it is to be shared. Parties can agree to use specific dispute resolution mechanisms during the period for amicable settlement. In essence, the contract formation process can be used to manage and shape the dispute resolution processes at the back-end without offending the rules prescribed by funding organisations. At the moment, this is not the case. For the Employer, the impression created that the structure for future dispute resolution is imposed by third parties has created a sense of lack of ownership of the structure. Consequently, with the exception of the dispute mechanisms which were administered by entities under it (e.g. Engineer's determination) or those it had some control over (e.g. negotiation), the Employer's approach to the use of mechanisms under the current dispute resolution arrangement in practice, has been pedestrian at best.

However, the Employer's attitude to dispute resolution in practice has not only been down to lack of opportunity to contribute to the dispute resolution system design. The very nature of the Employer, the actions of its sub-units and the context within which they operated also contributed negatively to the dispute resolution system design and the dispute resolution processes (see section 8.3.3.3).

8.3.3. *The Employer as a Monolith*

The Employer, like the contractor, is considered as a single unit. This consideration sometimes takes for granted the structure and the operational mechanisms of the State. As demonstrated under section 7.2 above, the State consisted of several organisations. Each entity played different but crucial roles in the performance of the contractual duties of the Employer (see section 7.2.1.3). No single entity could exercise all the powers of the Employer at any given time without consulting or seeking the approval of other organisations. Unlike private sector Employers, the State operates an elaborate legal system which determined the functions of each sub-unit and consultations and approvals necessary.

Consequently, the Employer's performances under construction contracts naturally suffered delays due to the complex nature of its decision-making processes. For instance, section 65 of the Public Procurement Act, 2003 (Act 663) and clause 8 of the 1999 FIDIC Conditions of Contract for building and engineering works (the Red book) provide timetables for the execution of written contracts and commencement of works respectively. For major construction projects such as those which were the subject of this study, parliamentary approval under Article 181(5) of the Constitution was required (see section 7.3.2.4). A contract signed in compliance with the timetable under section 65 of Act 663 remained unenforceable until parliamentary approval was obtained. Similarly, any commencement of work pursuant to the default position under clause 8 of the 1999 FIDIC Red book prior to Parliament's approval of such transactions was void (see *A-G v Faroe Atlantic Company Limited* [2005-2006] SCGLR 271). Thus, the demands of the legal system of the Employer necessarily prolonged timeframes for decision-making by the Employer and this had implications for its responsiveness to dispute situations.

The Employer's ability to perform its roles under construction contracts efficiently and in a timely manner were also negatively affected by other contextual problems such as lack of

effective cooperation and coordination among its sub-units (see section 7.2.1.3), human resource deficiencies (see section 7.2.2.1) and internal turf wars. There were also the difficulties posed by political interference in the process of infrastructure procurement and dispute resolution (see section 7.2.2.2) and the fear of being blacklisted (see section 7.2.2.3). Implications of the above-listed contextual problems for the dispute resolution processes are discussed under three themes namely: (i) occurrence of disputes; (ii) dispute resolution system design; and (iii) dispute resolution processes in practice.

8.3.3.1. *Implications for the Occurrence of Disputes*

Disputes are by no means peculiar to the Ghanaian construction industry. Studies from several countries reviewed provided different lists of potential sources of disputes (see Table 4.1). Some of the sources of disputes identified included changes in owners' requirement, poor definition of scope of work, variations, site possession issues, poor quality of documents (design errors and contractual problems), delays and payment issues. Many of the factors identified as causing disputes were associated with the actions and behaviour of the Employer and its representatives. For instance, Aibinu and Odeyinka (2006) identified variation orders, slow decision-making and cash flow problems as some of the client-related issues causing delays on projects in Nigeria. After studying disputes from 130 projects in Jordan, Al-Momani (2000) concluded that delays in owner decision-making, payment by owners/cash flow problems during construction, design changes and design errors were among the main dispute causes. Cheung and Yiu (2007) identified seven client-related potential dispute causes. These included disagreements on acceleration cost, failure to pay variation claims, general site possession issues and errors in documentation. The other potential causes were substantial changes in bills of quantities, changes of scope and late instructions from the Employer's representatives (see also Love *et al.*, 2011).

The outcome of the data analysis disclosed similar dispute causes in Ghana (see section

7.3.5). These included poor definition of scope of work, frequent design changes, variations, delayed payments and laxity in contract administration. Poor definition of scope of work, delays in delivering project sites and delayed payments are used here to illustrate how the nature and the context of the Employer influenced occurrence of disputes. Consensus *ad idem* (when two parties to an agreement have the same understanding of the terms of the transaction they are entering into) is a basic requirement of a valid contract which signifies meeting of minds. Where this is not the case, there is a likelihood of future disputes. APC alluded to the existence of poor definition of scope of works by the Employer leading to a mismatch between the Employer's requirements and the Contractors' responsibilities. The effect of this lapse was the occurrence of preventable claims and disputes. Examples of situations where parties had encountered disputes as a result of poor definition of scope were given by CPW5 and CPR3 in respect of two different projects. In both situations, there were indications that the parties had different understanding of the scope of the works expected to be carried out under the contract.

Again, it was the responsibility of the Employer to deliver project sites to contractors. The data revealed delays in the delivery of project sites. There were instances where delays were attributed to lack of coordination and cooperation between implementing agencies and other State institutions responsible for the relocation of utilities (see item 4 in Table 7.5). The consequences of such delays were claims against the Employer.

Furthermore, it was the duty of the Employer to ensure that there were adequate resources to pay for work executed by contractors. The data analysis revealed that although funding arrangements for projects were required to be made prior to award of contracts, the Employer was unable to honour (on time) its payment obligations under many construction contracts. Such delays were attributed to the Employer's penchant to commit to several projects without an honest assessment of its ability to pay for them. Consequently, delay in honouring

payments for works executed by contractors was among the common sources of dispute. Even where the resources were available, administrative bottlenecks also occasioned delays.

Duplication of roles and unduly lengthy chains of inter-organisational consultations and approvals hindered prompt processing of certificates. This view supports findings of previous related studies on the subject (World Bank, 2003; Anvuur, 2006; Osei-Tutu and Sarfo Mensah, 2008). One such study on procurement practice in Ghana commissioned by the World Bank identified erratic release of funds from Government coffers without regards to payment schedules and cumbersome payment approval processes as some of the reasons for payment delays (World Bank, 2003). Central to the cumbersome payment system was the involvement of multiple organisations leading to excessively protracted approval procedures. A common feature which runs through all three examples cited above was lack of effective coordination among sub-units of the Employer leading to ineffective and tardy decisions.

Every so often, transactions which were proceeding according to contract were interfered with by politicians. In some cases, these resulted in the termination of such contracts. There were also instances where interference by politicians went beyond abrogating contractual obligations to taking technical decisions. Contractors were sometimes instructed to commence projects prior to the execution of the construction contract (see *Martin Amidu v A-G & 2 Ors.* examined under section 7.3.2.4). The consequences of these interferences were that contractual requirements were ignored thereby providing bases for aggrieved parties to make claims or commence dispute resolution processes.

8.3.3.2. *Dispute Prevention*

The use of avoidance and reduction strategies to curb disputes is a well-established practice in construction industries across the world. The literature on the subject has been examined under section 4.3.1. Avoidance strategies identified included the use of standing neutrals (Harmon, 2003, Yates and Duran, 2006 and Ng *et al.*, 2007), collaborative

procurement strategies (Cowan, 1991; Construction Industry Institute, 1991; Crowley and Karim, 1995; C.I.B, 1997; Critchlow, 1998; Stehbins *et al.*, 1999; Bresnen and Marshall, 2000; Hinchey, 2012), effective project management (Yates and Duran, 2006; Ng *et al.*, 2007; Morgan, 2008) and efficient planning and preparation (Mitropoulos and Howell, 2001). Additionally, there was a trend towards dispute prediction as a means of reducing dispute occurrence (Diekmann *et al.*, 1994; Diekmann and Girard, 1995). Fenn (2007) has argued that effective dispute avoidance will require prediction.

The dispute resolution processes in Ghana did not pay attention to dispute avoidance and management. Notably, there was no policy which specifically targeted dispute prevention or reduction. As a result, there was no dispute consciousness during the early stages of construction transactions. MDAs implementing projects did not have adequate strategies in place to curb disputes. Consequently, steps which could have been taken to avoid or reduce construction disputes such as those identified from the literature were not taken. Accordingly, the Employer was exposed to claims and disputes. The process of infrastructure procurement was primarily driven by funding needs. Using the procurement process as a means to achieve dispute prevention or reduction was not a priority. There were challenges with project planning, preparation and management.

In the absence of clear structures for dispute avoidance, the ideal starting point will be for the Employer to have a clear policy on dispute reduction and management. Such a policy must consider and incorporate avoidance strategies such as the use of collaborative procurement methods, the utilisation of standing neutrals and the enhancement of project planning, preparation and management.

8.3.3.3. *Implications for Dispute Resolution System Design*

Contract formation and the impact of third parties on the design of dispute resolution system for infrastructure projects have already been discussed (see section 8.3.2). Beyond the

impact of funding requirements, there were internal problems which affected the Employer's ability to influence the design of the dispute resolution structures. Four of these difficulties namely lack of policy on construction dispute resolution and an overriding dispute resolution objective(s), lack of alternatives to dispute clauses in General Conditions, lack of knowledge and expertise, and human resource constraints are discussed in succession.

Firstly, the Employer's dispute resolution objectives were unclear. There was no policy on construction dispute resolution which drove the process. From the evidence, delays, cost, destruction of relationships and parties' dissatisfaction with the outcome of processes were major concerns that the Employer had with the existing dispute resolution processes. By inference, it is argued that speed, cost reduction, preservation of relationships and parties' satisfaction with outcome of the process were among the critical objectives that may inform the Employer's approach to dispute resolution mechanism selection. However, there were no indications that negotiations over dispute clauses were informed by such objectives.

Secondly, the Employer did not have any viable alternatives to the dispute resolution mechanisms or procedures provided in nominated Conditions of Contract. Regarding this issue, CPA5 observed as follows:

'[I]f we don't accept international commercial arbitration (ICA) which one will we do [accept]. That is also another problem. If we say we don't want ICA, which one do you want and if you are not ready with something like that then why would you go and stick out your neck'.

CPA5's response revealed one of the problems negotiators representing the Employer faced during contract negotiations, namely lack of alternatives to extant dispute clauses. 'Alternatives' as used here does not necessarily imply a departure from the extant dispute clauses but considerations which will ensure that the current structures address the Employer's dispute resolution objectives.

Thirdly, lack of knowledge and expertise on the range of dispute resolution mechanisms limited the contribution that the Employer was able to make to the dispute resolution design

process (see section 7.5.3). From the results of the data analysis, contracts were negotiated by the implementing agencies in many instances (see section 7.2.1.3). Some interviewees from the implementing agencies acknowledged that there was lack of knowledge of the range of dispute resolution options. For instance, CPW5, APG and ABP1, among others, admitted that more training on the other DRMs was required for all involved in projects including staff of both the Employer and contractors (see section 7.4.1.2).

Further, the Employer's ability to influence the process of dispute system design also depended on its human resource strength. The challenges posed by inadequate human resource to the Employer have been highlighted under section 7.2.2.1. The Employer may address the human resource problem in three ways namely training existing staff, devoting a section of the A-Gs to contract review and recruiting new staff. Firstly, the Employer will need to offer regular training to personnel from the implementing agencies at the forefront of contract negotiations. This will ensure that contract negotiators at the MDAs are well-informed of the dispute resolution objectives of the Employer. Additionally, such training sessions will need to focus on equipping the negotiators with the requisite skills for their assigned tasks. Furthermore, training can also focus on the areas where the Employer has opportunity to influence the dispute system design (as outlined under 8.3.3.3). The provision of sporadic training, as is the case currently, will not suffice. The training must be designed as part of a wider programme for continuous professional development which will count towards promotion and future performance assessment.

Secondly, in view of the legal requirement of contract review, the need for human resource improvements at the A-Gs is crucial. At the moment, the over-burdened staff divide their attention between other responsibilities and contract review. Consequently, the time and expertise needed to ensure that dispute clauses were properly vetted were lacking. The need for a section of the A-Gs to be devoted solely to contract review was echoed by some

interviewees including CPA 2, CPA3 and CPA4. The responses of CPA 5 to series of questions about the A-Gs' role in contract review (reproduced below) summed up views on the need for this unit:

We have a huge number of contracts here; that I can say, plenty that move in and out of this house every day. In fact we are even thinking that due to their sheer numbers we need a department for just that. You see, because they are many and they are varied. They need some kind of expertise. So we are calling for a department for that, just that, and to train people for just that, then it will take a huge chunk of the work off the Solicitor-General.

Q.: What other reasons will you give for advocating for the setting up of that office apart from the fact that these contracts are many and require expertise?

A: The expertise required is so specialized that you don't just leave it and also because of them we end up paying huge sums of money so it is worth looking into. We can end up saving much money from that side of things because if we had people who look into these things very well and make sure that every single contract passed here and it was handled timeously, many of the problems we have wouldn't have happened. You understand, because those same people will then advise if you were going to do something against that contract, 'please don't! This is what the contract says if you do this, this is the implication. We will not end up paying damages for wrongful termination and that kind of thing. Huge sums of money you hear us paying because we don't have an office dedicated to do that and everybody does anything they like. And once they start telling them that every contract should come here then we need to put the infrastructure in place to receive the contract. Right now we are not standing that strong to be receiving the sheer numbers that they are receiving right now.

The role of such a unit will be to ensure that the contract review role of the A-Gs is carried out efficiently. However, the establishment of such a unit will be feasible only when there is improvement in staff numbers and quality. Consequently, the final suggestion is fairly straightforward; the Employer will need to embark on a recruitment drive to appoint individuals with relevant expertise to augment the existing workforce at the A-Gs and the various MDAs.

8.3.3.4. *Implications for Dispute Resolution Practice*

Section 7.4 reported on how construction disputes involving the Employer and foreign contractors were resolved in practice. The dispute resolution processes were substantially influenced by the dispute resolution choices the parties made at the contract formation stage. However, the analysis also pointed to other factors including lack of inter-organisational

cooperation and coordination, human resource constraints and political interference (see section 8.3.3). To achieve clarity, the consequences of each of the factors on the dispute resolution processes and likely remedial options are examined separately.

8.3.3.4.1. *Lack of Inter-organisational Cooperation and Coordination*

Lessons from the data analysis relating to three dispute resolution mechanisms namely negotiation, international arbitration and mediation are used to demonstrate how lack of cooperation and coordination among the sub-units of the Employer influenced the extant dispute resolution processes in practice. As reported in section 7.4.1.2, negotiations often took place at different levels of the political strata of the Employer progressing from the lowest to the highest. Consequently, it was normal to have unsuccessful negotiations between implementing agencies and contractors escalated to the ministerial level. Negotiations required the participation of various entities representing the Employer such as the resident engineer, the implementing agency concerned, the sector Ministry, MOFEP's representatives and lawyers from the A-Gs. This was because each entity played a unique role within the Employer organisation. However, the involvement of multiple organisations with diverse functions had implications for inter-organisational cooperation and decision-making and this in turn affected expeditious resolution of disputes.

During dispute negotiations, the difficulty encountered by the Employer related to participation by relevant organisations and the availability of relevant information. For instance, where the A-Gs were leading the negotiation process, they relied on the implementing agency concerned to furnish information on the dispute. In some cases, line managers of implementing agencies whose responsibility it was to present such information failed to do so. The consequence of this practice was that the Employer was often unable to pull together all the relevant information required to support its case. Ultimately, the effect of lack of cooperation among entities representing the Employer on negotiations included

delays, tardy decision-making leading to poor negotiation outcomes.

It is acknowledged that negotiation is informal and not subject to strict rules and procedures. However, it is important that the Employer develop guidelines for its practice as part of General Guidelines for the use of alternative dispute resolution mechanisms by government agencies (see section 8.5 on remedial strategies). The importance of such dispute resolution guidelines, as underscored in section 7.5.1, is that persons acting on behalf of the Employer will have some benchmark or guidance on the use of the various alternative dispute resolution mechanisms. Such guidelines may consider timelines for negotiations, who should be involved and the responsibilities of various entities participating in the process.

In relation to international arbitration, the effect of poor coordination and cooperation between entities representing the Government had far reaching consequences. Failure of implementing agencies to provide required information on disputes affected the Employer's ability to file appropriate defences to claims. In such situations, the Employer was also deprived of the opportunity to provide evidence in support of its case. Delayed release of relevant information by implementing agencies resulted in failure by the Employer to meet deadlines of arbitral tribunals. In some cases, entities in charge of projects failed to respond to claims by contractors, inspect progress of projects or attend important project meetings. These lapses eventually impacted on the ability of the Employer to conduct a robust and successful dispute resolution process. Other repercussions of such institutional lapses included award of cost against the Employer for filing processes out of time, losing arbitrations and being saddled with huge arbitral awards. It was therefore not surprising that cost of dispute resolution (see section 7.4.1.3.2), frequently losing arbitration cases (see section 7.4.1.3.4) and issues of mounting judgment debt against the Employer were among some of the concerns interviewees expressed in the data on the use of international arbitration.

Regarding the effect of the Employer's nature on mediation, it is often emphasized that the

representatives of the parties to a mediation process must either have or be accompanied by a person with authority to settle. Securing the authority to settle a matter involving the Employer posed an enormous challenge due to the involvement of different entities in the decision-making process. In an earlier example referred to under section 7.4.2.3 on conciliation and mediation, the mediator involved had to personally consult two Ministers of State as part of the process, even though the State had a dedicated representative attending the mediation regularly. It was however unclear if the chains of consultation leading to prolonged decision-making and delays had anything to do with the limited use of mediation in resolving construction disputes in Ghana. What is certain, however, was that the chains of consultation and approvals associated with the workings of the Employer slowed down decision-making considerably.

To address the problem of cooperation and coordination, the Employer will have to streamline the roles of the various entities involved in dispute resolution. This can be achieved through identification of individual institutional roles and the provision of timeframes for their performance.

8.3.3.4.2. Impact of Human Resource Constraints on current Dispute resolution processes

Human resource problems of the Employer such as shortage of staff and lack of expertise have already been examined in relation to their impact on establishing the structure for future dispute resolution (see section 8.3.3.3). These deficiencies also impacted on the resolution of disputes. A small team of lawyers had the responsibility of resolving disputes from diverse fields of Government business. The workload of the team responsible for dispute resolution was such that very little time was available for a thorough professional assessment of the nature of disputes and how they could be resolved cost effectively. The approach to dispute resolution at the A-Gs was compared to the process of firefighting (see section 7.2.2.1).

Limited resources and lack of expertise coupled with excessive workload meant the limited expertise available was channelled to where they were needed most at any given time. Once the urgency associated with a particular problem was reduced, the team moved on to other burning issues. There was no dedicated team responsible for the resolution of construction disputes. However, it is well known that construction contracts and disputes are very technical and require the services of technical specialists (Capper and Bunch, 1998). At the MDAs, there was evidence that individuals who handled claims and differences were not sufficiently equipped with knowledge of conflict and dispute management techniques (see 7.4.1.2 and 7.5.3).

Dealing with the human resource problems of the Employer can enhance its chances at better dispute resolution. It is recommended that personnel of the various MDAs involved in contract administration should be offered regular training in dispute reduction and management. It is expected that as staff apply dispute avoidance and management techniques and skills acquired, the number of disputes which will eventually be referred to the A-Gs will reduce. Nevertheless, disputes which are eventually referred to the A-Gs will also need to be dealt with efficiently. As the body with the legal mandate to represent the State and its agencies in disputes, the A-Gs will also need to be sufficiently equipped with the necessary human resource to perform its dispute resolution role.

Apart from investing in additional staff, it is suggested that a unit similar to the one for contract review (see section 8.3.3.3) be established at the A-Gs. Such a unit will have the responsibility of focusing on disputes arising from construction and engineering projects involving the Government which are referred to the A-Gs from the MDAs. With the relevant expertise, the unit will be better placed to provide technical advice on dispute resolution options to the Attorney-General. The unit can also play a useful role in post-dispute resolution evaluation by the Employer.

8.3.3.4.3. *Impact of Threat of Blacklist and Political Interference on Dispute Resolution*

Information on both political interference and threat of blacklist was examined under sections 7.2.2.2 and 7.2.2.3 above. In this section the focus is on how these practices have contributed to shape the extant dispute resolution processes. Contractors regularly appealed to politicians for their intervention in brewing disputes with the Employer. Interventions from politicians pursuant to such appeals often lacked transparency and formality. The implication is that it is impossible for the Employer to determine whether such dispute resolution approach was beneficial to its cause or not (see section 8.2 above). It was evident that this practice was filling a gap in the extant dispute resolution processes, namely the absence of use of intermediary dispute resolution mechanisms involving third party neutrals. Under the current dispute resolution processes, when negotiations between contractors and MDAs over disputes break down, the next option available to parties was international arbitration. For parties who were unwilling to take such drastic steps, the search for a way to resolve such disputes led them to political actors.

To reduce the practice of using political actors to resolve disputes, parties will have to incorporate into their contracts express provisions on specific intermediary mechanisms which they will fall on in case negotiations failed and they were not ready for international arbitration. Whilst this suggestion may not stop appeals for political interventions, it may help contractors who resorted to political interventions as a result of lack of formal intermediary mechanisms.

Regarding the fear of being blacklisted, contractors who envisaged future business opportunities refrained from any adjudicatory dispute process which pitched them against the Employer. Consequently, there was a view that the phenomenon had resulted in fewer disputes against the Employer. Beneath the seeming absence of disputes was a practice by contractors which ensured that disputes were kept alive as long as they possibly could whilst

business opportunities were utilised. The threat of blacklist had three implications on the extant dispute resolution processes. Firstly, it gave the Employer a false sense of security from disputes thereby creating the impression that there were few infrastructure-related construction disputes in Ghana. Secondly, it led to the ‘bottling up’ of disputes. Finally, the phenomenon had stifled growth and use of dispute resolution mechanisms because parties did not make regular use of the range of mechanisms available.

8.3.3.4.4. Impact of the Legal System on Infrastructure-related Construction Dispute Resolution

The legal framework for infrastructure-related construction dispute resolution was based on contract law. Nonetheless, the involvement of the Employer as a State introduced additional public law requirements. Lack of clarity of the confines of Article 181(5) of the Constitution which required international business or economic transactions to which the Government of Ghana was a party to receive parliamentary approval had spawned a number of judicial decisions in the Supreme Court (see section 7.3.2.4). In spite of the attempt by the judiciary to clarify the confines of this law, it is still difficult to identify with certainty which transactions will require parliamentary approval.

This situation is worrying for private parties especially those involved in borderline transactions. This is more so since the effect of non-compliance is that the affected transaction is void. Declaring contracts void for non-compliance with constitutional provisions had the collateral effect of stifling the enforcement of contractual obligations and contractually agreed dispute mechanisms which were otherwise valid.

Another element of the legal system which had implications for the extant dispute resolution processes was the effect of section 1 of the Alternative Dispute Resolution Act, 2010 (Act 798) which excluded matters relating to national and public interest from the purview of the Act. Transactions such as those involving the Employer and foreign

contractors invariably entailed public and national interest elements. By implication, these transactions were excluded from the purview of the law. This is the case even though there were other legislations, such as the Ghana Investment Promotion Centre Act, 2013 (Act 865), which allowed disputes between the State and foreign investors to be resolved by international arbitration. Other implications of the current position of the law on construction and engineering contracts involving foreign contractors are discussed elsewhere (see Mante and Ndekugri, 2012). To encourage foreign contractors to settle disputes in Ghana, the laws on domestic arbitration need to be harmonised. In addition to the factors discussed above, a number of other factors which stifled the development and use of dispute resolution mechanisms have already been identified and examined under section 7.5 above.

8.4. Summary of Key Features of the Extant Dispute Resolution Processes

In chapter seven, the dispute resolution processes for major infrastructure projects in Ghana were described. The chapter also identified and discussed factors which had shaped the said dispute resolution processes. Some of the key features of the dispute resolution processes identified are as follows:

- (i) absence of clearly defined objective for infrastructure-related dispute resolution;
- (ii) absence of policy dealing specifically with construction disputes arising from major projects;
- (iii) lack of recognition of the specialised nature of the subject-matter (construction);
- (iv) procurement driven mainly by funding and not considered crucial to dispute resolution outcomes;
- (v) funding requirements determined Conditions of Contract and the dispute resolution mechanisms to be used;
- (vi) negotiations over dispute clauses took place within the parameters provided by the nominated Conditions of Contract;

- (vii) dispute clauses often tailored to suit contractor preferences;
- (viii) human resource constraints and the absence of dedicated expertise for contract negotiations;
- (ix) operational inefficiencies of the Employer's sub-units made it prone to disputes;
- (x) main dispute mechanisms in use were engineer's determination, negotiation and international arbitration;
- (xi) intermediary dispute resolution mechanisms such as mediation, dispute review boards, dispute adjudication board, expert determination, and early neutral evaluation were rarely used;
- (xii) minimal use of third party neutrals. Only time third party neutrals were employed was when the parties were resolving disputes either by litigation or arbitration;
- (xiii) dispute resolution processes were characterised by high cost, low parties' satisfaction with outcomes and destruction of business relationships;
- (xiv) fear of being blacklisted stifled dispute resolution practice;
- (xvi) absence of information on previous dispute resolution efforts to guide future steps—poor record keeping; and
- (xvii) absence of a mechanism or programme to evaluate dispute resolution processes after disputes were resolved.

8.5. Remedial Strategies

Recommendations by interviewees on how to improve the extant dispute resolution processes (see Figure 6.7 above) related to structural or contextual issues, contract formation (negotiating dispute clauses) and actual dispute resolution. The structural issues focused on improving the general context within which disputes occurred and were resolved. These included recommendation on policy changes, education and training and development of standards for the use of dispute resolution mechanisms by government agencies. The

categories ‘front-end ordering’ and ‘dispute avoidance and reduction’ harboured all the recommendations relating to contract formation and the design of the structures for future dispute resolution (negotiating dispute clauses). ‘Increased use of DRMs’ and ‘DRM Practice-weighing your options’ deal with recommendations on the actual resolution process.

Considering the discussions on the state of the existing dispute resolution processes (see section 8.2), the factors accounting for it (see sections 8.3), the results of the data analysis on remedial strategies and the relevant literature, it is submitted that creating an effective and efficient dispute resolution process will entail adopting a holistic approach which pays attention to four key components namely; (i) structural and contextual issues; (ii) dispute resolution system design; (iii) dispute avoidance and resolution; and (iv) post-dispute resolution- evaluation of outcome.

8.5.1. Paying Attention to Structures and Context

The discussions under section 8.3.3 above have underscored the relevance of the nature of the Employer, the activities of its sub-units and the environment within which they operated to the dispute resolution processes. Similarly, it has been demonstrated that the nature of the foreign contractor has also contributed to shape the current dispute resolution processes (see section 8.3.1). Consequently, it is important for the parties, particularly the Employer to take specific steps to prepare the context within which major infrastructure procurement takes place and to establish adequate structures to ensure that it can effectively deal with disputes. Table 8.1 below outlines a number of suggestions (derived from the data) for preparing the infrastructure project setting for dispute resolution.

Table 8.1: Recommendations on Front-end Preparations for Dispute Resolution

Recommendations	Details
1. <i>Learning from Past Experiences</i>	Keeping a database of previous disputes and how they were resolved and using the lessons from such experiences to enrich current processes (CPR8 & CPR9)
2. <i>Investigating the cost of disputes and their resolution</i>	<p>(i) This process will provide material for a database of dispute resolution and encourage policy makers to develop policy for dispute resolution as a matter of priority.</p> <p>(ii) It will also unearth the real cost of disputes and their resolution and this is likely to prompt the Employer to pay attention to the dispute resolution processes (CPE6)</p>
3. <i>Need for a Specific Policy and clear overriding objectives for dispute resolution in the context of major projects</i>	<p>(i) Currently, there is neither a clear dispute resolution objective nor a specific policy on how the Employer approaches infrastructure related dispute resolution. Such a policy will set clear overriding objectives for the process. Objectives may include saving expense (by ensuring that cases are dealt with in ways which are proportionate to the amount of money involved, reflect the importance of the case and the complexity of the issues) and ensuring speedy resolution.</p> <p>(ii) In addition to the policy, General Guidelines on the use of the diverse forms of dispute mechanisms to resolve infrastructure-related construction disputes is also required (see section 7.5.1).</p> <p>(iii) A checklist for contract negotiations relating to dispute clauses will need to be developed with a clear goal to achieve the overriding objectives set for dispute resolution. (CPA3, CPE6, CPA 4, CPA5, CPF1 etc.)</p>
4. <i>Impact of relevant contextual factors must be considered</i>	(i) Policy, Guidelines and or the Checklists must consider factors such as funding requirements, legal and statutory requirements, the political and cultural environment in which Employer exist and identify how the effects of these factors

Recommendations	Details
	<p>on dispute resolution can be either curtailed or utilised to achieve the dispute resolution objectives of the Employer.</p> <p>(ii) Policy must also take into account the international dimensions of disputes from major construction projects and ensure fairness to all parties.</p>
<p>5. <i>Promoting regular use of Alternative dispute resolution mechanisms</i></p>	<p>(i) Mediation, Conciliation, DRBs, DAB, Expert determination and other mechanisms must be explored and utilised based on their suitability to specific situations. This will enhance their visibility. The data revealed strong discomforts with international arbitration. Yet, there were also strong indications that neither contractors nor funding institutions are willing to play down the prominent role of international arbitration.</p> <p>(ii) The Employer has the option to place more emphasis on the use of negotiation and intermediary dispute mechanisms so as to reduce the number of disputes which may end up at international arbitration.</p>
<p>6. <i>Legal Reform</i></p>	<p>(i) The law which requires that contracts which constitute ‘international business and economic transactions to which the government is a party’ must receive parliamentary approval must be clarified to avoid the current confusion which is generating disputes and stifling the implementation of contracts (see section 7.3.2.4);</p> <p>(ii) Section 1 of the ADR Act, 2010 must be amended to enable suitable matters of public and national interest to come under the purview of the legislation (see section 8.3.3.4.4 above).</p>
<p>7. <i>Developing Standards for the use of less known dispute resolution mechanisms</i></p>	<p>(iii) Professionals should be furnished with standards which will guide decisions regarding the use of particular dispute resolution mechanisms.</p> <p>(iv) The proposed standards may address issues such as weighing the options available, selecting a mechanism, providing justification based on the dispute resolution objectives set out in the policy, using cost-benefit analysis as a basis for mechanism selection etc.</p>

Recommendations	Details
<p>8. <i>Streamlining institutional roles in dispute resolution</i></p>	<p>This will entail:</p> <ul style="list-style-type: none"> (i) Improving the ADR capacity of personnel involved in infrastructure procurement and dispute resolution at the MDAs; (ii) Establishing two specialist units within the Attorney-General's Department to be responsible for the review and negotiation of construction and engineering contracts, and disputes arising out of such contracts ; (iii) Providing guidelines on coordination and cooperation between MDAs and the A-Gs in relation to information flow and dispute handling; and (iv) Identifying timelines for dispute handling by the various institutions. This may include providing some indications as to when differences/disputes must be transferred to the A-Gs.
<p>9. <i>Education and Training</i></p>	<ul style="list-style-type: none"> (i) Provision of structured formal and informal training of Employer's staff to develop expertise in construction-related dispute mechanisms and also to continuously update their knowledge on current trends (see section 8.3.3.4.2); (ii) Training must also focus on helping staff to understand the Employer's dispute resolution objectives and to provide updates from evaluations of past disputes resolution experiences and lessons arising therefrom; (iii) Putting together plans and strategies to consciously work towards the removal of other barriers affecting dispute resolution (see sections 7.5) through education.
<p>10. <i>Dispute Avoidance/Reduction</i></p>	<ul style="list-style-type: none"> (i) An aspect of the policy on the resolution of infrastructure-related construction disputes must address the dispute avoidance and reduction; (ii) Considering the use of collaborative procurement strategies and standing neutrals (see section 8.3.3.2); (iii) Enhancing contract management and administration, adopting a pro-active stance towards claim minimisation and settlement

Most of the suggestions on subjects such as education and training, and learning from previous experiences will require continuous improvement. The gains from such improvements will provide a favourable environment for contract formation (including the negotiation of dispute clauses) and dispute resolution. For instance, it is likely that specialisation will lead to a more thorough consideration of contract terms and conditions; parties will be able to identify and explore more options in contract negotiations.

8.5.2. *The Contract Formation Stage – Designing the Dispute Resolution Structure*

The design of the dispute resolution structure takes place during contract formation. Often the period of contract negotiations also offer the parties the opportunity to provide project specific details for the dispute resolution structure. What transpires at this stage as far as the situation in Ghana is concerned has been discussed under sections 7.3.2 and 8.3.2 above.

It is suggested that personnel involved in negotiations on dispute clauses must move beyond the current practice of limiting attention to the selection of venue, governing law and rules, language, and selection of third party neutrals. Such negotiations must have a number of aims. Firstly, it must focus on establishing a dispute resolution framework capable of achieving the overriding dispute resolution objectives of the Employer. Secondly, it must aim at addressing problems observed with previous dispute resolution experiences. In other words, lessons from previous dispute resolution experiences must inform new negotiations on dispute clauses. For example, since cost is identified as a problem, clauses on cost-sharing and capping of interest recoverable can be explored and negotiated into new dispute clauses. Bespoke rules on evidence aimed at cost and time reduction can be explored, negotiated and incorporated into Special Conditions.

Thirdly, negotiations on dispute clauses need to incorporate new terms on possible intermediary resolution mechanisms which parties will utilise during the period of amicable settlement. As explained under section 7.4.1.2 on negotiations, the current practice was that

parties continued to negotiate during the period for amicable settlement. There was no evidence of use of any intermediary dispute resolution mechanism during the period for amicable settlement. Parties using the FIDIC forms, for example, should identify a range of mechanisms they will employ during the amicable settlement period, discuss procedures for their use and incorporate them into the contract as Special Conditions.

Pre-determined dispute resolution clauses have their own challenges. The mechanism or the procedure agreed upfront may be unsuitable for the actual dispute that may arise in the future (Sime, 2007). Albeit, parties can build into the Special Conditions mechanisms which will enable them to employ different methods and procedures in case those originally agreed are unsuitable. Essentially, the proposal here is that parties need to spend a lot more time and resources to craft a detailed dispute resolution agreement which is context-sensitive, multi-tiered, procedurally rich and flexible enough to allow changes where necessary. This should be done even if it means separating the dispute clauses into a distinct dispute resolution agreement which will be acknowledged as a separate but integral part of the main construction agreement.

Two other recommendations on training personnel involved in contract negotiations at the MDAs and the establishment of a unit within the A-Gs for contract review on behalf of the Employer have already been discussed above (see section 8.3.3.3). The aim of these recommendations is to enhance the Employer's ability to utilise the contract formation period effectively to contribute to the design of the dispute system.

8.5.3. *Dispute Avoidance and Resolution*

The literature on construction dispute prevention has been discussed under section 4.3.1 and 8.3.3.1. Five sets of avoidance approaches were identified. These are the use of standing neutrals (Gerber, 2000; Fenn *et al.*, 1997; Harmon, 2003; Yates and Duran, 2006 and Ng *et al.*, 2007), the use of procurement and relational contracting strategies such as partnering and

alliancing (Harmon, 2003; Doug, 2006; Ross, 2009; Kratzsch, 2010; Le Nguyen, 2011; Hinchey, 2012), use of effective project management strategies such as cost and schedule control, quality management and constructability (Fenn *et al.*, 1997; Yates and Duran, 2006; Ng *et al.*, 2007; Morgan, 2008) and general project planning and preparation (Mitropoulos and Howell, 2001). A fifth strategy, dispute prediction, has been canvassed mainly by Fenn (2007) who has argued that ability to predict dispute is essential to dispute prevention. This study has revealed issues with project preparation and management (see sections 7.3.5 and 7.5.1). It has also found that procurement is primarily driven by funding needs; dispute prevention or avoidance was not an issue considered during procurement. There was limited use of intermediary mechanisms and third party neutrals (see sections 8.2.4). The idea of using standing neutrals was new and rarely used. Generally, there was limited emphasis on dispute prevention.

Every effective and efficient dispute resolution strategy must, first of all, aim at preventing or reducing the occurrence of disputes; parties must start right (Diekmann and Girard, 1995). This is because an effective dispute avoidance regime has the potential to reduce the number of disputes which eventually end up for resolution. Options available to the Employer for dispute prevention or reduction were discussed under section 8.3.3.2. These included developing a policy on dispute prevention and reduction, using procurement methods and strategies which encourage parties to focus on building collaborative relationships so as to reduce disputes, using standing neutrals such as Dispute Review Boards or Dispute Resolution Experts and training staff responsible for projects to be aware of and comply with the Employer's policy on avoidance.

To deal with the human resource issues affecting dispute resolution, the Employer must enhance dispute prevention, management and resolution capacities of the MDAs. It must also establish a unit within the A-Gs which will be responsible for the handling of construction and

engineering disputes referred to the A-Gs. The unit will become the ‘technical eye and brain’ of the Attorney-General who is ultimately required by law to represent the State during dispute resolution. Additionally, in cases where the use of international arbitration is inevitable, the unit will explore and implement cost-cutting measures such as arranging for arbitration hearings to take place in Ghana or securing an agreement for local witnesses of the Employer to give evidence via video link or before a local judge for subsequent transmission to the Arbitral tribunal.

8.5.4. *Post-Dispute resolution - Evaluation of Outcome*

A policy on construction dispute resolution must develop criteria for evaluating the outcome of every dispute resolution process. Essentially, such a process must compare outcomes with the specific dispute resolution goals set for the project and the aims and objectives set out in the national policy. Reasons for meeting the required objectives or failure to do so must be identified. Based on lessons from a particular project, remedial strategies or recommendations can be made and fed into a national database on disputes. Such information will then become part of the pre-contract contextual information available for future projects.

Table 8.2 below provide a summary of the key factors to be considered under each set of remedial strategies.

Table 8.2: Summary of the Four Sets of Remedial Strategies

Remedial Strategies			
Paying Attention to Structure and Context (10 Elements)	Designing the DR System (5 Elements)	Dispute Avoidance and Resolution (6 Elements)	Evaluation of Outcome-Post DR (5 Elements)
Learning from Past experiences Investigating the cost of DR	Focus on agreeing a DR framework capable of	Develop policy on Prevention	Compare outcomes with project goals on DR and National

Need for Policy and overriding objectives for Infra-related DR	delivering DR objectives of the Employer	Use collaborative procurement	policy objectives on infra-related DR
Considering impact of contextual factors-e.g. funding, political interference, legal framework etc.		Use Standing neutrals	
Promoting ADR use			
Developing standards for the use of ADR by government entities	Aim at addressing previous DR challenges	Training staff at the MDAs in ADR practice	Identifying successes / why?
Streamlining institutional roles on infra-related DR	Identify, agree, incorporate specific mechanism to be used during the period for amicable settlement	Establish a unit for Infrastructure-related DR	Identifying failures/why
Education and Training		Improving project planning and management	Making recommendations for future projects
Focusing on dispute avoidance and management	Training of Personnel	Cutting cost of Arbitration – e.g. implementing cost sharing agreement	Instituting a forum where failures and successes of DRMs utilized will be discussed among relevant staff of Employer
Legal reform	Setting up a Contract review unit		

8.5.5. *The Dispute Resolution Efficiency Cycle*

The four sets of remedial strategies suggest various actions that the Employer can take at various stages of a dispute resolution cycle to improve the process. In this study, a dispute resolution cycle refers to relevant phases in a project cycle when critical decisions about disputes are made. This cycle is divided into four stages namely the pre-project stage, the dispute resolution system design stage, the actual dispute resolution stage and the post-

resolution evaluation stage. Each of the four sets of remedial strategies targets one of the components of the cycle. The first of the four strategies namely paying attention to structures and context focuses on general improvements (structural and operational) which the Employer can make to enhance its capacity to deal with disputes (see section 8.5.1). This set of strategies is fundamental to any improvement in the dispute resolution processes and must necessarily be the starting point. Improvements from the first set of remedies are expected to be incremental and continuous.

However, it is expected that resulting changes will enhance the ability of the Employer to participate effectively in activities related to dispute resolution at all stages of the dispute resolution cycle, particularly the second stage. The second set of strategies (see section 8.5.2) corresponds to the second stage of the dispute resolution cycle. They aim at getting the Employer to actively participate in the crafting of the structure for future dispute resolution processes. Again, improvements made to the Employer's practices at this stage will ensure that appropriate dispute mechanisms and procedural details are in place for future dispute resolution. The third set of remedial strategies concentrates on suggestions to improve the actual dispute resolution process. It is at this stage that all previous preparations and arrangements for effective resolution are to be implemented. Once the process of resolution is completed, it is expected that the fourth set of remedial strategies namely post-resolution evaluation will be undertaken. Consequently, the strategies proposed are reduced into a model called the Dispute Resolution Efficiency Cycle as illustrated by Figure 8.1 below. As continuous improvements are made at each stage and impacts of such enhancements influence other stages of the cycle, it is expected that a more effective and efficient process of dispute resolution will be attained.

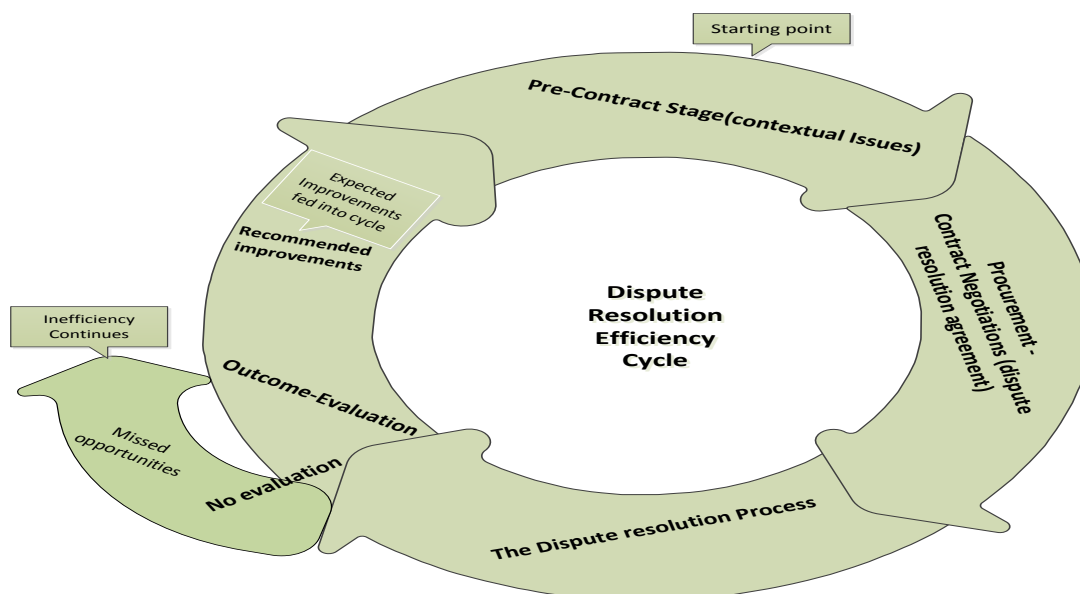


Figure 8.1: The Dispute Resolution Efficiency Cycle (DREC)

The implementation of the DREC by the Employer will necessarily entail making policy, institutional and operational changes to the current process of infrastructure procurement and dispute resolution (see section 10.5).

8.5.6. Contribution of Foreign contractors and Funding Organisations

The use of right-based dispute resolution mechanisms by contractors in a dispute involving the Employer carried the risk of destroying business relationships. This is not in the interest of the foreign contractors. Supporting the recommendations above particularly those on dispute reduction and regular use of intermediary mechanisms will reduce recourse to international arbitration and consequently help sustain business relationships. Funding organisations will do well to discuss dispute resolution policies they attach to funds with the Employer and adopt them with the interest of all parties in mind. This will ensure that both parties own the dispute resolution processes. It will also reduce the perception of bias currently associated with the extant dispute processes.

8.6 Summary

In this chapter, the infrastructure-related dispute resolution processes in Ghana have been evaluated on the basis of the literature. The evaluation shows that the existing processes fall

short of some of the standards expected of an efficient and effective dispute resolution process such as substantial involvement of parties in the design of the dispute system, voluntary participation, involvement of third party neutrals and education and training. Consequently, the dispute resolution processes were characterised by high transaction cost and lack of satisfaction with outcomes. From the analysis, it emerged that the existing dispute resolution processes were the product of the nature of the parties to infrastructure contracts, the context within which they operated and their responses to the context. Factors such as lack of coordination among the Employer's sub-units, human resource constraints, the existing legal structures, political interference and threat of blacklist (associated with the Employer) generally had negative impacts on dispute occurrence, dispute resolution system design and dispute resolution. To deal with these challenges and achieve an efficient and effective dispute resolution process, the Dispute Resolution Efficiency Cycle (DREC) is proposed.

CHAPTER NINE

CHAPTER NINE - VALIDATION

9.1. Introduction

As is the case with all other aspects of the research process, the overarching influence of the philosophical paradigms reflects how research is validated. Quantitative research has widely accepted and well established criteria for assessing the quality of research. These include validity, reliability and generalizability. Validity has to do with the credibility and the accuracy of the conclusions of the research. Reliability deals with the extent to which the research can be replicated. Generalizability focuses on the extent to which the findings of the research can be generalized. However, different perspectives exist on how qualitative research is validated (Creswell, 2007; Bryman, 2008). In this chapter, a brief survey of the qualitative literature on validation and research evaluation generally is presented leading to the examination of the procedure utilized to validate the outcome of this study, namely triangulation and respondent validation (member-checking) among other methodological steps taken throughout the research process.

9.2. Validation in Qualitative Research

Schwandt (1997) defines validity in qualitative research as the extent to which the findings of the research reflect accurately participant's reality of the phenomena studied. Generally, there is lack of consensus on the criteria for validating qualitative research (Creswell, 2007; Pyett, 2003; Angen, 2000). Broadly, the approaches range from those which advocate the use of quantitative standards such as validity and reliability (Bryman, 2008; Mason, 1996; LeCompte and Goetz, 1982) to those which advocate alternatives to the quantitative options (Lincoln and Guba, 1985). These differences in approach are based on philosophical loyalties. Within the range, there are several other approaches. Angen (2000) refers to Silverman (1993) and Hammersley (1995) as examples of the mid-range approaches. For researchers in this category, their approach to validation straddles the philosophical paradigms of realism and

interpretivism. They admit the existence of an objective reality independent of the knower but also accept that reality can be known from individual perspectives (see Angen, 2000). Hammersley (1995), for instance, define validity as ‘confidence’ rather than ‘certainty’ and advocates plausibility, relevance and importance as criteria for assessing validity. Silverman (1993) on the other hand, suggest careful case selection, hypothesis-testing, inductive analysis and quantifying through counting as criteria for measuring validity. Whitmore *et al.* (2001) argue for a synthesis of the differing perspectives.

An example of the perspectives which advocate for the use of distinct terminologies to validate qualitative research is Lincoln and Guba (1985). Strauss and Corbin (1998) also subscribe to this view. Lincoln and Guba (1985) advocated for the use of standards of evaluation more suitable to the naturalistic framework. To them, qualitative research must be measured in terms of its trustworthiness and authenticity (Guba and Lincoln, 1994). They defined trustworthiness as entailing ‘credibility’, ‘transferability’, ‘dependability’, and ‘confirmability’. Authenticity was defined in terms of the impact of the research. Whilst the above criteria can be viewed as qualitative equivalents of the quantitative criteria, the criteria of trustworthiness and authenticity were fashioned to accommodate one of the central ideas of interpretivism, namely the existence of multiple accounts of social reality (see Table 9.1 below). Consequently, this study used the validation criteria proposed by Lincoln and Guba (1985) because of its leanings towards interpretivism.

Table 9.1: Lincoln and Guba’s (1985) criteria for qualitative validation compared with Quantitative Approaches (Source: Adapted from Bryman, 2012)

Elements of Trustworthiness	Quantitative Equivalent	Meaning
Credibility	Internal validity	Are the findings plausible? Feasibility or credibility rather than a single conclusion (in causal terms) is what will lead to the acceptance of the findings of a research in view of the existence of multiple accounts of social reality.
Transferability	External validity	Do the findings apply to other context? Contextual uniqueness rather than generalizability is the preoccupation of qualitative research. However, certain features of qualitative studies can ensure that findings are generalised.

Elements of Trustworthiness	Quantitative Equivalent	Meaning
Credibility	Internal validity	Are the findings plausible? Feasibility or credibility rather than a single conclusion (in causal terms) is what will lead to the acceptance of the findings of a research in view of the existence of multiple accounts of social reality.
Transferability	External validity	Do the findings apply to other context? Contextual uniqueness rather than generalizability is the preoccupation of qualitative research. However, certain features of qualitative studies can ensure that findings are generalised.
Dependability	Reliability	Are the findings likely to apply at other times? Stability of research findings must be assessed based on the assumption that such findings are subject to change and instability since social reality cannot be 'frozen'.
Confirmability	Objectivity	Has the investigator's values and prejudices intruded into his findings beyond reasonable limits? Objectivity is impossible in social research but the researcher must act in good faith.
Authenticity		Research Impact: Fairness

9.3. Procedures for Validation

The literature identifies a number of procedures that can be used to assess the validity of qualitative research. Whittemore *et al.* (2001) identified 29 different validating techniques employed throughout the research process. At the design stage, the authors identified triangulation or sample adequacy among other techniques. At the data collection stage, Whittemore *et al.* (2001) referred to making explicit data collection decisions, prolonged engagement or demonstrating saturation, among other techniques. Member-checking, memoing and exploring rival explanations are some of the validation techniques suggested by Whittemore *et al.* (2001) at the data analysis stage. Creswell (2007) on the other hand focused on eight different procedures including triangulation, member-checking, reflexivity (clarifying researcher bias) and peer review. The other four procedures suggested by Creswell (2007) are external audit, explaining negative cases, rich, thick description and prolonged engagement in the field. Reviewing the qualitative literature, it appears some of the procedures are commonly used by qualitative researchers than others. These include

triangulation, respondent validation, reflexivity and peer review (Bryman, 2012; Angen, 2000, Creswell and Miller, 2000). These procedures are briefly outlined below.

9.3.1 Triangulation

This refers to the use of multiple sources of data, methods, theories and researchers to study a phenomenon (Miles and Huberman, 1994). The essence of triangulation is to verify the extent to which different methods, data sources and investigators corroborate or contradict the findings of each other when used to study a common phenomenon. The assumption is that using different data sources, investigators or methods will help eliminate bias, result in a convergence of patterns of meaning or understanding of the phenomenon under study thereby strengthening the validity of the research (Angen, 2000; Mathison, 1988).

Denzin (1978) identified four different types of triangulation namely, data, methods, investigator and theories triangulation. Data triangulation refers to using different data sources with person, time and space in mind. Investigator triangulation entails using more than one investigator in a research whilst theories triangulation advocates the use of different theoretical lenses to study a social phenomenon. Similarly, methodological triangulation refers to the use of different methods to study a common social phenomenon. Denzin (1978) distinguished between two types of methodological triangulations namely, within-method and between-method. Regarding the latter, separate methods are employed to study a common phenomenon and the outcome compared. In respect of the former, different techniques are used within the confines of one method. Though useful as a technique for validation, triangulation has also been viewed as having the potential to produce as much contradictory outcomes as it could convergent findings (Mathison, 1988; Angen, 2000).

9.3.2 Reflexivity

This technique of validation entails self-reflection by researchers on the implications of their knowledge, methods, decisions and biases on the outcome of a study and making such

claims explicit at the onset of the research. By expressly admitting of the existing biases and prejudices with which the researcher approaches a study, it is expected that this will contribute to creating a distance between the researcher and the object of study and thus contribute to objectivity. This view of the notion of reflexivity has been criticized as being misguided since the inquirer and the subject of inquiry are not separated merely by such declarations (Angen, 2000).

9.3.3 Peer Review

This involves a third party whose responsibility is to act as a check on the researcher. His role entails asking the researcher hard questions about choices that the latter has made during the research process (Lincoln and Guba, 1985). Whilst a peer reviewer can help evaluate the cogency and persuasiveness of the researcher's arguments, he will not have adequate knowledge of the subject matter of the research sufficient to enable him to have the ability to judge the interpretations that the researcher has developed from the data (Angen, 2000; Morse, 1994).

9.3.4 Respondent validation

Respondent validation focuses on obtaining the views of interviewees on the credibility of the research outcomes (Creswell, 2007). Lincoln and Guba (1985, p.314) consider this technique as '*the most critical for establishing credibility*'. With this technique, outcomes of data analysis, conclusions and recommendations are referred back to participants for their comments. In such cases, the role of the participants is to judge the accuracy and plausibility of the outcomes. Feedback from the participants may be obtained through different channels. These include organizing a focused group where the findings are discussed or interviewing participants on the research outcome.

Whilst this technique may provide useful feedback on the findings and interpretations of a study, it also has its challenges. Since the social environment is not static, participants may

change their minds (Morse, 1994). They may have encounters or experiences which may change their perspective on issues. Where findings are not favourable to participants, they may even go on the defensive (Bryman, 2012).

9.4. Validation in this study

Respondent validation and triangulation were the main validation techniques used in this study. Two considerations informed the choice of validation strategy. The first was the philosophical assumptions underpinning the study. The second was the need for the research participants to comment on the findings and interpretation (Creswell and Miller, 2000). Different data sources were triangulated. Three different categories of documentary data were collected. These were archival records, internal documents of organisations and institutions involved in the study and documents of a legal nature. Past project reports, contract documents, project appraisal reports, proceedings on parliamentary hearings on arbitral awards, published laws and judicial decisions were among the documents collected (see section 5.5.3.3). In addition to the documentary sources, interviews were conducted with 56 participants from diverse backgrounds with varied experiences. Accounts from each of these diverse data sources were corroborated by accounts from other sources. For instance, accounts relating to the complex nature and operations of the State as an Employer were obtained not only from statutory sources but also from interviews.

Two methodologies, case study and grounded theory were employed. Though used together, they offered the opportunity for wider methodological focus and application. For instance, whilst case study offered depth and focus, adherence to grounded theory principles ensured that theoretical insights were not missed. Beyond the between-method strategy, there was also within-method triangulation. For instance, different data collection methods (interviews and documents), sampling techniques (purposive, snowball and theoretical) and

data analysis methods (grounded theory principles and legal analysis) were employed together thereby providing diverse lenses through which the subject of dispute resolution was studied.

Regarding respondent validity, in addition to the initial steps taken during data collection to obtain confirmation from participants of information received from previous interviewees, the outcomes of the study were also sent back to interviewees for their feedback. Limited time and resource constraints made it impossible for a wider audience to be consulted either through focus group meetings or face-to-face interviews. However, a summary of findings and request for feedback were sent by e-mail to forty-two out of the fifty-six interviewees. Additionally, the views of three individuals who were not interviewed previously were also sought. This brought the total number of individuals contacted for feedback to forty-five.

9.5. Feedback from Interviewees

Out the forty-five individuals contacted for feedback, fifteen responses were received constituting a response rate of about thirty-three per cent.

9.5.1. Background of Interviewees

Ten of the responses received were from interviewees affiliated to the Employer who had previously participated in the research. Two individuals who could not be reached for interviews during the initial data collection also responded. This brought the total of interviewees from organisations affiliated to the Employer to twelve. Three of the fifteen responses were from individuals from organisations affiliated to foreign contractors. During the main interviews, about twenty per cent of the participants were from the foreign contractor group whilst eighty per cent were from the Employer. The responses from the foreign contractor group on the summary of findings constituted twenty per cent of the total number of respondents (see Figure 9.1).

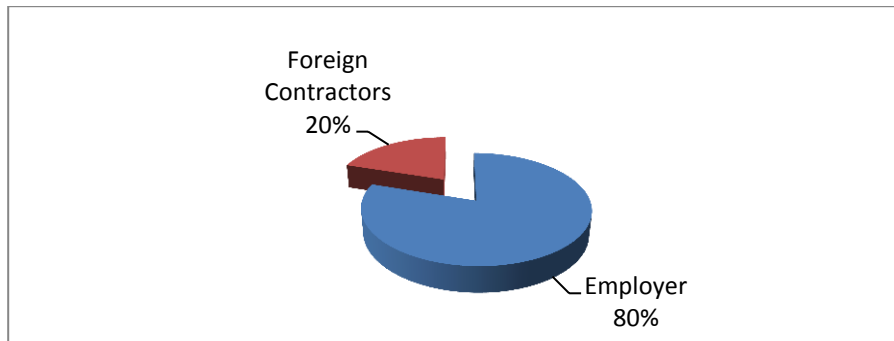


Figure 9.1: Validation by Participants (Source: Field Data)

In terms of professional affiliation, nine of the participants had law background, three were engineers and two were quantity surveyors (see Figure 9.2 below).

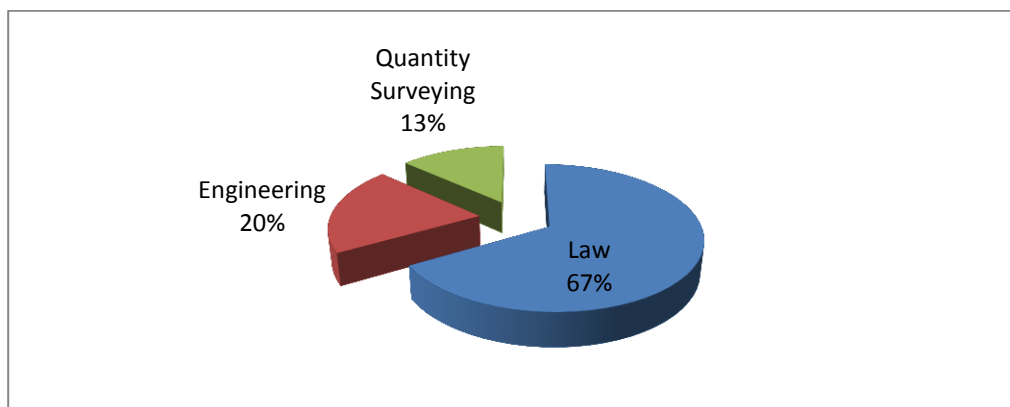


Figure 9.2: Professional background of Participants (Source: Field data)

The interviewees were asked to answer three questions on the summary of findings. These were as follows: (i) whether there were other features of the extant dispute resolution processes which had not been captured by the summary report; (ii) whether there were other factors accounting for the extant dispute resolution processes other than those identified in the summary of findings; and (iii) whether the proposed remedial strategies were feasible. Interviewees' responses were coded and analysed under three themes representing the three questions namely 'features of the extant dispute resolution system', 'factors accounting for it' and the 'feasibility of remedial strategies'.

9.5.2. Results of Analysis

All 15 interviewees stated that the features of the extant dispute resolution processes captured were comprehensive. For instance, APG observed as follows: *'The summary captures the salient features of the extant dispute resolution processes'*. PPA1 also stated as follows: *'The summary is comprehensive'*. Additional comments made by interviewees related to issues such as lack of adequate knowledge of DRMs, the use of Expert determination in the energy sector, the use of diplomatic channels to resolve disputes arising out of projects which are outcomes of bilateral relations between two States and the relationship between funding and the selection of DRMs. Comments on lack of knowledge of DRMs and expert determination repeated issues which had already been covered (see sections 7.4.2.2 and 7.5.3). On the use of diplomatic channels, it was observed that, even within such contexts, the bilateral parties resort to mediation or negotiations. In effect, the use of diplomatic channels underscored the need for ADR preparedness.

Comments relating to the relationship between funding and the selection of DRMs stemmed from the finding that DRM selection was imposed by funding agencies. Whilst CPE3 insisted that the Employer had a role in the selection of DRMs, CPR1 was not comfortable with the idea of 'imposition'. CPR1 provided a clarification on the issue in the following excerpt:

The choice or selection of any dispute resolution mechanism is not made by third parties (funding agencies). The Contract Agreements in use in the construction industry (eg the road sector) are the FIDIC conditions of contract or are modelled on FIDIC and the tiers or the various forms of dispute resolution mechanisms are provided in those contract forms and therefore parties exercise their choice or choices of a dispute resolution mechanism within the parameters of those provided in any particular form of contract. The choice is not foisted on parties by the funding agencies. Parties have to work with and within the set of applicable documents tied to a loan or a grant. Ultimately the funding source determines the gamut of documents that drive the implementation of the project both in form and substance. I also think the funding agencies perceive that international arbitration is the most transparent as compared with the others.

What is missing in the excerpt is the fact that the FIDIC forms attached to grants and loans

invariably reflected the dispute resolution policies of the funding organisations (see Gerber, 2001; Ndekugri *et al.*, 2014). The FIDIC Conditions of Contract provided parameters within which parties selected DRMs. Negotiations relating to DRMs were held within the confines of those provisions in the FIDIC form. In effect, funding requirements had a major impact on which DRMs parties eventually agreed.

Again, the fifteen interviewees found the factors accounting for the current dispute resolution processes enumerated to be comprehensive. Additional comments covered issues such as causes of disputes, the threat of blacklist and disputes between contractors and sub-contractors. Whilst the last issue is outside the scope of this work, the other issues had already been addressed (see section 7.3.5 and 7.2.2.3).

The feedbacks on the remedial strategies were equally positive. The interviewees were unanimous in their endorsement of the feasibility of the strategies. CPF1 observed as follows:

The proposed remedial strategies are deemed to be smart, pragmatic and practical...As designed, formulated and structured the Dispute Resolution Efficiency Cycle is considered a workable mechanism that will refine the extant dispute resolution processes’.

To APN, the *‘remedial strategies outlined are critical to the successful implementation of a holistic infrastructure dispute resolution process’*. On his part, APG noted as follows: *‘I endorse the remedial strategies proposed and have nothing to add. I think an application of the strategies would enhance competence in the dispute resolution process as envisage in your findings’*. CPA2 also observed thus: *‘I think the remedial measures suggested are broad enough and your suggestions on how to remedy the shortfalls you have identified are very apt’*.

However, interviewees such as CPE3, APE, CPA9V and APN were of the view that a successful implementation of the remedial strategies will depend on political will. For instance, APN observed that the political oversight of the A-G, who may not have expertise in the subject of infrastructure-related construction dispute resolution, may well stifle effective

implementation. The establishment of special units within the A-Gs also received a number of comments. Whilst two-thirds of the interviewees were optimistic that the units will be useful, the other third were of the view that its success will depend on getting the right mix of expertise, overcoming the problem of lack of coordination between A-Gs and MDAs and insulating the proposed units from political interference. Some concern with overstaffing at the A-Gs was expressed but this was countered by another view which insisted that the A-Gs must spearhead efforts at improving dispute resolution because they eventually possess the legal mandate to deal with such disputes.

As an addition to the recommendations on post-dispute resolution evaluation, it was suggested that the A-Gs may consider instituting *'a forum annual or otherwise, at which the failures and successes of any dispute resolution mechanism involving GOG as a party could be shared and discussed to inform future ADR processes'* (CPR1). In sum, feedbacks on the summary of findings from interviewees were positive, with interviewees largely endorsing the outcome of the study as reflecting their experiences. The remedial strategies were deemed feasible.

9.6. Transferability

This concept is the qualitative equivalent of generalizability. Stake (1995) posits that the primary essence of case study is not to understand other cases. He writes, *'our first obligation is to understand this one case'* (Stake, 1995, p.4). This assertion is true of qualitative studies generally. Contextual uniqueness rather than generalizability is the preoccupation of qualitative research. However, Flyvbjerg (2006) holds the view that the findings from a single or small number of cases can be generalised as much depends on the case in question and how it is chosen. Flyvbjerg (2006) argues further that many well-known scientific experiments were single-case experiments which did not involve randomly selected large samples. Case study findings can also be used to adjust grand generalisations (Stake, 1995). Flyvbjerg

(2006), on the same issue, indicates that case study can be used for generalisation using Karl Popper's (1959) test of 'falsification'. Borrowing Popper's example of the black swan, he argues that where the position remains that "all swans are white", a discovery of a black swan will falsify the earlier proposition and lead to a revision of the theory on swans. Such a contribution by the single case will have general implications for the pre-existing proposition, thereby leading to a revision of the generalisation. He concludes that case study is particularly better placed to identify the 'black swan' as it emphasises on depth.

Notwithstanding the fact that the findings of this study stemmed from Ghana as a case, there is a possibility of naturalistic generalization. As Stake (1995, p.85) put it, *'people can learn much that is general from single cases. They do that partly because they are familiar with other cases and they add this one in, thus making a slightly new group from which to generalize...'* Readers from other developing countries who may be interested in this study are likely to be familiar with related experiences. The findings in this study will either add to such experiences or help modify previous generalizations.

9.7. Dependability and Confirmability

The concept of dependability is akin to the quantitative concept of reliability. Whilst transferability focuses on whether the findings will be applicable to other context, the concept of reliability address the question whether the findings will apply at other times. In other words, can the findings be replicated? The concept of dependability admits of the changing nature of social reality and thus requires that any future attempts at replication will bear this fact in mind. Actors can change their minds. They may be influenced by new experiences and may therefore interpret their world differently at a different time. However, with this assumption in mind, steps were taken in this study to leave an audit trail of steps and procedures followed in this study. Explicit descriptions of the research design, data collection

and analysis have been provided. Materials used in this study have also been securely kept for future reference.

Confirmability is about objectivity; whether a neutral party going through a similar process will arrive at similar conclusions. The challenge objectivity poses in qualitative research is acknowledged. In this study, attempt at confirmability was through constant self-reflection. The steps taken to ensure credibility, transferability, dependability and confirmability of the research outcomes are summarized in Table 9.2 below.

Table 9.2 : Practical Steps towards ensuring Quality of the Research

Evaluation Criteria	Practical Steps
Credibility	Different data sources (documentary sources, archival records and interview transcripts) were triangulated. Corroborative evidence was sought from different participants to confirm the identified categories.
	Findings from the data collection as reflected in categories were subjected to verification by key participants (member checking).
	A chain of evidence was built from the case study questions through to the case study conclusion.
	At the data analysis stage, rival explanations were addressed to ensure that the account was plausible.
Transferability	To ensure tentative generalizability, a robust framework grounded in the data collected emerged at the end of the study.
	Rich, thick description is used to convey the findings.
Dependability	A database of research material has been kept from the beginning of the research till the end.
	The procedures being followed throughout this work have also been documented.
	Transcription was checked to ensure accuracy and avoid mistakes.
Confirmability	The findings have been scrutinised by at least one external auditor.

9.8. Research Impact

Dissemination of the findings of the studies through publications is one of the principal means through which the research may make an impact on society. So far, one journal article entitled ‘Arbitrability in the Context of Ghana’s new Arbitration Law’ has been published in

the *International Arbitration Law Review*, an internationally recognised refereed journal. Two other journal papers on ‘the interplay between contract and public law and the implications for major infrastructure transactions’, and ‘the complex nature of the Employer and the implications for claims and disputes’ are currently under review. Refereed journals targeted include the *Public Procurement Law Review* and the *International Journal of Project Management*.

In addition to three journal papers, two peer reviewed papers were presented at two separate conferences namely the RICS Construction and Property Conference (COBRA, 2011) and the Annual Association of Researchers in Construction Management (ARCOM, 2012) Conference. Feedbacks from reviewers of the first of the two papers titled ‘Resolution of Disputes arising from Major Infrastructure Projects in Developing Countries’ were taken on board in the design of the study. The second paper titled, ‘The Influence of Procurement Methods on Dispute Resolution Mechanism Choice in Construction’ examined the relationship between procurement methods and dispute resolution mechanisms. The feedback from this paper also influenced the discussions on the relationship between procurement and dispute avoidance and resolution in this study.

There have been indications that the journal paper on arbitrability is currently part of the teaching materials in use at the Ghana School of Law. Again, the second article on interplay between contract and public law addresses one of the critical national constitutional issues which have had enormous impact on international transactions involving Ghana. It is expected that the paper will make contributions towards policy change.

9.9. Summary

In this study, Lincoln and Guba’s (1985) credibility, transferability, dependability and confirmability were used, instead of internal validity, external validity, reliability and objectivity, to establish the trustworthiness of the research. Respondent validation and

triangulation were the main techniques employed to validate the research outcome. Feedback on the summary of research findings sent to interviewees for their comments were positive.

CHAPTER TEN

CHAPTER TEN - FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

10.1. Introduction

This study examined the resolution of infrastructure-related construction disputes in developing countries using Ghana as a case study. In this chapter, a brief overview of the study and how the objectives of the research have been met is presented (section 10.2). This is followed by an outline of the summary of the research findings (section 10.3). A number of contributions that the research has made to knowledge are also discussed from two perspectives; general addition to the body of knowledge (10.4.1) and contribution to practice (section 10.4.2). The implications of the research findings and limits of the research are also highlighted (section 10.5 and 10.6). Finally, recommendations for further research are made.

10.2. Research Overview

This study aimed at a critical examination of developing countries' experiences of infrastructure-related construction dispute with the view to develop strategies for efficient and effective resolution. To achieve this aim, a number of objectives were set and pursued. These were as follows:

1. a critical review of the literature on the state and trends of infrastructure development in developing countries, the processes relating to major project acquisitions and how construction disputes arising out of such transactions were resolved;
2. identification and examination of features and context of the key parties involved in construction and civil engineering contracts relating to major infrastructure projects;
3. an investigation into aspects of the legal framework for infrastructure procurement relating to dispute resolution such as the contract formation process, procurement methods and the impact of procurement on dispute resolution;

4. examination of the legal framework for resolving disputes arising out of major projects including the processes involved from the emergence of a dispute to its final determination;
5. identification of challenges to the extant modes of resolution including barriers to the use of methods other than litigation and international commercial arbitration; and
6. development of an explanatory framework and remedial strategies for the extant construction dispute resolution processes.

Sections 10.2.1 and 10.2.2 below and the section on summary of research findings (section 10.3) outline how the research objectives were achieved.

10.2.1. Objective One

The first objective was achieved through review of previous studies as reported in Chapters two, three and four. Chapter two examined the current state and trends in infrastructure development in developing countries. The review disclosed that growing research has found a critical linkage between infrastructure development and economic development in developing countries. Consequently, many States and bilateral and multilateral development organisations have focused attention on infrastructure projects in developing countries during the past two decades. Ghana was no exception to this development. In the face of huge infrastructure deficits, the State has stepped up emphasis on infrastructure development. In Chapter three, a review of the literature on infrastructure projects procurement (methods and practices) in Ghana was presented. The traditional procurement method was dominant in infrastructure projects delivery. There was also information on the use of other methods such as design and build, EPC and PPP. Where donor funds were involved, procurement guidelines of funders were used. There were several deficiencies with the existing procurement process and these resulted in claims and disputes. Further, it was observed that procurement was mainly driven by funding needs and its impact on dispute resolution was hardly considered.

In chapter four, a review of the literature relating to how construction-related disputes arising from major infrastructure projects were resolved was presented. The evaluation focussed on both developed and developing countries. This approach was adopted to provide a comparative basis for assessing practice in developing countries, including Ghana. Construction-related disputes were common occurrences in both developed and developing countries (see section 4.2.3). However, there is a general move towards resolving such disputes by less costly ADR mechanisms other than litigation and arbitration in developed countries. Mechanisms such as mediation, expert determination, adjudication and DRBs are increasingly being used to resolve construction related disputes in the United Kingdom, United States, Hong Kong, Australia and Singapore. The same cannot be said for developing countries. Evaluation of the relevant literature disclosed that international arbitration was the main dispute resolution mechanism for infrastructure-related construction disputes arising from major infrastructure projects. There was limited literature on resolution mechanisms which were employed by parties prior to recourse to international commercial arbitration.

10.2.2. Objectives two to six

These objectives were achieved through collection and analysis of field data. Using a qualitative research approach informed by the interpretivist paradigm, data were collected through interviews and documents and analysed using grounded theory principles and doctrinal legal analysis (see chapters five and six). The outcomes of the data analysis are reported in chapter seven. The above objectives were addressed by themes which emerged as outcomes of the data analysis. The theme ‘Features and Context of Parties to the dispute resolution processes’ addressed the second objective of the study (see sections 7.2, 10.3.2.1 and 10.3.2.2). The ‘Procurement’ theme responded to the third objective of the study (see sections 7.3 and 10.3.2.3). The fourth and fifth research objectives were addressed under the themes ‘the Dispute Resolution Processes’ (see sections 7.4 and 10.3.1) and ‘Barriers to the

use of ADRMs' (see sections 7.5 and 10.3.2.5). The sixth objective of the study was addressed under the theme titled 'Remedial strategies' (see sections 8.5 and 10.3.3).

10.3. Findings

The findings of the study are divided into three parts namely, the extant dispute resolution processes, factors accounting for them and remedial strategies.

10.3.1. The Extant Dispute Resolution Processes

The study found that Engineer's determination, negotiation and international arbitration were the most regularly used dispute resolution mechanisms (DRMs) by parties to major infrastructure projects in Ghana. Other mechanisms such as Dispute Adjudication Boards (DAB), Expert determination, Mediation and Conciliation were rarely used. The implication is that a whole category of intermediary dispute resolution mechanisms were often not utilised. The only time third party neutrals got involved in the process of dispute resolution was when arbitration was used or the parties found themselves in court. This made the resolution process expensive and time consuming. In some cases, the resolution process oscillated between interest-based options and right-based options. For instance, parties who were arbitrating were able to continue with negotiations, and in exceptional cases, attempted mediation whilst the arbitration was on-going.

The dispute resolution processes suffered from specific difficulties including high dispute resolution cost (in terms of money and time expended), delays, low satisfaction with international arbitration outcomes and negative effect of international arbitration on relationships between parties. The study also disclosed substantial challenges with dispute resolution system design. Actual parties to major construction transactions had limited influence over the selection of dispute resolution mechanisms and procedures. Dispute resolution clauses were negotiated within the parameters of the clauses in nominated Conditions of Contract. The Employer neither had policies in place to guide the process nor

did it have overriding dispute resolution objectives in place to help negotiators make decisions about dispute system design. The Employer had resigned to the fact that funders made choices about dispute clauses and literally went along with such preferences. No effort was made to identify opportunities to ensure that previous dispute resolution challenges did not recur.

Some aspects of the dispute resolution processes also lacked transparency and accountability. Parties who failed to settle disputes through negotiations and were reluctant to proceed to international arbitration often appealed to politicians for their intervention. It was difficult to judge the usefulness of such interventions as they were usually informal and bereft of any accountability. Absence of systematic and continuous education and training of professionals also resulted in a situation where parties stuck to dispute resolution mechanisms they were comfortable with, such as negotiations.

There was no national policy on infrastructure-related construction dispute resolution. Construction and engineering disputes were treated like any other dispute despite their peculiar features. There was no written policy or guideline on the use of ADR by the Employer on disputes arising out of public projects. Essentially, State attorneys who decided to use dispute resolution mechanisms other than litigation and arbitration had no written guidance as to choice or procedure.

10.3.2. Factors Accounting for the Extant Dispute Resolution Processes

It was found that the dispute resolution processes were not merely the product of the parties' agreement but their features, actions and context. The main parties involved in the process were the Employer (the State and its Agencies) and foreign contractors.

10.3.2.1. The Complex Employer

The Employer was constituted by several institutions (sub-units). Each of these entities played different but vital roles in the performance of the contractual duties of the Employer. This made consultations between sub-units and approval seeking a normal part of the

Employer's operations (see section 7.2.1.3). Consequently, the Employer's performances under construction and engineering contracts naturally suffered delays due to the complex nature of its decision-making processes (see section 8.3.3). The implications of the complex nature of the Employer on dispute resolution were amplified by deficiencies associated with the operations of its sub-units.

For instance, the A-Gs suffered operational difficulties during resolution of disputes as a result of lack of effective cooperation and coordination between them and other MDAs. Again, lack of information flow between the A-Gs and other MDAs affected the former's ability to respond to disputes against the Employer and these affected efforts at settlement and effective dispute resolution (see section 7.2.1.3 and 8.3.3.3). The Employer also had serious human resource deficiencies. The roles of the A-Gs in dispute resolution were indicatively described under the *in vivo* codes '*jacks of all trades*' and '*fire-fighting*'. The few legal professionals at the Civil Division of the A-Gs were saddled with the roles of providing legal advice to all the other agencies of State, negotiating and reviewing contracts from the MDAs and representing the Employer at all dispute resolution forums. There was no dedicated team of experts in charge of construction and engineering disputes. The MDAs involved with the initial stages of dispute resolution also lacked the requisite training.

By virtue of its very nature as a political organisation and its practices, political interference in procurement and dispute resolution were regular occurrences. Political interference was cited as one of the major sources of disputes. In some cases, politicians usurped the roles of technical entities responsible for managing major projects and gave instructions to contractors to move to site prior to the conclusion of contracts. There was evidence of resort by contractors to political officeholders for solutions to construction disputes (see sections 7.2.2.2). Again, there was evidence some aggrieved contractors did not pursue claims or disputes against the Employer for fear of being blacklisted. This

phenomenon had a particularly telling effect on the process of dispute resolution as it stifled the use of DRMs (see sections 7.2.2.3). As the Government's budgetary allocation of internal resources was unable to meet its infrastructure needs, there was extensive reliance on external funding and this, in turn, influenced decisions on choice of procurement strategies and selection of dispute clauses.

10.3.2.2. Foreign Contractors

By virtue of their nature, origin and perception of the domestic justice delivery system, foreign contractors generally opted for international arbitration. Fairness, effectiveness and efficiency, confidentiality and neutrality were some of the other reasons offered for the general preference for ICA (see section 7.2.3).

10.3.2.3. The Legal Framework for Procurement and Dispute System Design

The main legislation governing procurement in Ghana was the Public Procurement Act, 2003 (Act 663). However, the provisions of Act 663 did not apply where an applicable loan agreement, guarantee contract or foreign agreement provided different procedure for the utilisation of such funds (see section 14 and 96). In effect, there were two sources of procurement rules: (a) those under Act 663 which were mainly statutory; and (b) those under contractual arrangements between the Employer and funding organisations (see section 7.3.1). The procurement process for major infrastructure projects was largely driven by funding requirements. There were four main sources of funding for major infrastructure projects in Ghana. These were Government of Ghana (GoG), donors/bilateral and multilateral funding organisations, joint GoG and donors and private sources. GoG funding, the traditional source of funding was made available by the State through annual budgetary allocations. However, as Government's budgetary allocation of internal resources was unable to meet its infrastructure needs, there was extensive reliance on external funding (see section 7.2.2.4).

External funding arrangements for infrastructure projects often came with conditions relating to procurement, the use of nominated Conditions of Contract and selected dispute resolution clauses. Regarding Conditions of Contract, both the World Bank and USAID expressly demanded the use of FIDIC suite of Conditions of Contracts on their projects. European Union funded projects were executed under EU Conditions of Contract. Other multilateral institutions also subscribed to the FIDIC Conditions of Contract. Most of the fifty-six interviewees for this study identified the FIDIC suite of contract as the most popular for major infrastructure projects in Ghana (see section 7.3.2.1).

Clause 67 of the FIDIC Red book, 1987 Edition required parties to resolve disputes by Engineer's determination, amicable settlement and international arbitration. Clause 20 of the FIDIC Red book, 1999 and the MDB Editions replaced engineer's determination with DAB. During negotiations on dispute clauses, the most parties did was to agree on project-specific details aimed at operationalising the dispute mechanisms outlined in the General Conditions. As a matter of regular practice, the following terms were agreed by the parties: (i) the entity or body which will administer the international arbitration; (ii) the venue; (iii) the arbitration rules which will apply; (iv) the governing or applicable law; (v) the language; and (vi) the number of arbitrators and the selection process. Notably, there were no indications at all that parties provided details of what they were to do or mechanisms they were to use during the amicable settlement period. It was therefore not surprising that in practice, that period was utilised for further negotiations. The parties, especially, the Employer regularly failed to explore possibilities to improve the dispute resolution system design.

Another aspect of the existing legal framework on procurement of major infrastructure project which had a bearing on the extant dispute resolution processes was the interplay between public law requirements and major construction and engineering contracts. Beyond satisfying the requirements of contract law, parties to major infrastructure transactions

involving the State were obliged to comply with the public law requirement of seeking parliamentary approval for such projects (see section 7.3.2.4). Failure to do so rendered the affected transaction void. Declaring a contract void for non-compliance with constitutional provisions had the collateral effect of stifling the enforcement of contractual obligations and contractually agreed dispute mechanisms. Lack of clarity of the public law requirement was also a source of disputes between the Employer and foreign contractors (see *the Faroe Atlantic, Balkan Energy and Waterville Cases*).

10.3.2.4. *The Legal Framework for Infrastructure-related Dispute Resolution*

The legal framework for dispute resolution was essentially contract-based. As part of the construction contract, parties determine how future disputes were to be resolved. There was no specific legislation regulating how construction dispute were to be resolved. The provisions of the Alternative Dispute Resolution Act, 2010 (Act 798) generally applied to all cases including construction disputes, except those specifically excluded under section 1 of the Act such as matters relating to the enforcement and interpretation of the Constitution, the environment or public and national interest. The question still remains as to whether this exclusion does not preclude parties to major infrastructure-related construction disputes involving the State from resolving such disputes by the mechanisms and procedures advocated under the Act.

The ADR Act established an Alternative Dispute Resolution Centre. It was apparent that in establishing the Centre, the legislators did not have cases where the Government of Ghana was a party in mind. The Centre (if set up) was thus likely to suffer the same fate as the national courts since they will be perceived as lacking neutrality. Local private infrastructure for administering ADR was burgeoning. However, even the few entities which stood out as well-established organisations such as the Ghana Arbitration Centre and Gamey and Gamey Group were yet to gain the trust of parties to major infrastructure disputes.

10.3.2.5. Factors inhibiting use of Alternative Dispute Resolution Mechanisms

There were other factors which influenced the dispute resolution processes by inhibiting the use of intermediary ADR. These included public suspicion regarding the use of ADR to resolve public disputes, fear of failure to meet expectations if ADR is used instead of litigation or arbitration, the Employer's lack of policy and guidelines for the use of ADR by its sub-units and poor record keeping (see sections 7.5.). Limited knowledge of the wide range of dispute resolution mechanisms available, the adversarial culture, negative perceptions about ADR and limited ADR infrastructure and expertise were some of the other barriers to the use of intermediary mechanisms in construction disputes.

10.3.3. Remedial Strategies

In response to the current state of the dispute resolution processes and the factors identified as accounting for it, four sets of remedial strategies were proposed. These were to help improve the effectiveness (achieving set objectives) and efficiency (employing well-organised and efficacious procedures) of the dispute resolution processes (see section 8.5). The remedial strategies are as follows: (i) addressing structural and contextual issues; (ii) paying attention to dispute resolution system design; (iii) focusing on dispute avoidance and streamlining the resolution process; and (iv) conducting post-dispute resolution evaluation of outcome.

10.3.3.1. Addressing structural and contextual issues

Parties to major infrastructure contracts, particularly the Employer, need to take specific steps to prepare the context within which major infrastructure procurement and related dispute resolution take place. A number of suggestions for preparing the infrastructure project setting for dispute resolution have been made (see Table 8.2). These include learning from past experiences (create database of past disputes and how they were resolved, challenges etc.), investigating the current cost of dispute and dispute resolution and developing specific policy with clear overriding objectives for dispute resolution in the context of infrastructure projects.

In crafting policy and negotiation positions, it is expected that the relevant contextual factors will be considered. Other suggestions for preparing the dispute resolution context include developing standards for the use of less known dispute mechanisms, streamlining institutional roles in dispute resolution and providing required expertise. Additionally, regular formal and informal education and training of parties and practitioners is required. So is improvement in contract management practices.

10.3.3.2. Paying attention to Dispute Resolution System Design

Five specific strategies are recommended for adoption and utilisation during contract negotiations, particularly the aspect on dispute clauses. Firstly, beyond the current practice of limiting attention to the selection of venue, governing law and rules, language, and selection of third party neutrals, negotiations on dispute clauses must focus on establishing a dispute resolution framework or structure capable of achieving the overriding dispute resolution objectives of the Employer. Secondly, negotiations on dispute clauses must aim at addressing problems observed with previous dispute resolution experiences. Thirdly, negotiations on dispute clauses need to incorporate new terms on specific possible intermediary resolution mechanisms which parties will utilise during the period of amicable settlement. Further, staff of the MDAs must receive regular training to keep them abreast with their contract negotiation responsibilities. Finally, the A-Gs must have a dedicated team whose main responsibility will be to perform its contract review role.

10.3.3.3. Dispute Avoidance and Resolution

It is recommended that the Employer focuses on enhancing dispute avoidance and management. Strategies which can be employed to realise this focus include developing a policy on dispute prevention and management, using procurement methods which encourage parties to focus on reducing disputes, using standing neutrals and training staffs responsible for projects to be aware of and comply with the Employer's policy on dispute avoidance and

management (see section 8.3.3.1). The Employer must consider having a dedicated team at the A-Gs which will focus specifically on the resolution of construction and engineering disputes which are referred to the organisation by MDAs. The Employer must also focus on the use of intermediary dispute mechanisms in appropriate cases. The decision to use a particular dispute resolution process must be made in accordance with the proposed Guidelines on the use of ADR. Finally, the Employer must take active cost-cutting measures during international arbitration proceedings by implementing agreements on cost-sharing, cost-capping and introducing rules of evidence which will make it possible for evidence to be taken from witnesses in Ghana or have hearings conducted in Ghana.

10.3.3.4. Post dispute resolution –Evaluation of Outcome

There must be an active evaluation process after every dispute resolution process. Such process must focus on ascertaining the extent to which the process achieved the dispute resolution objectives of the Employer, the shortfalls or underperformances, the innovations and lessons to improve future processes.

10.3.3.5. The Dispute Resolution Efficiency Cycle

The four sets of remedial strategies above constitute the components of what is referred to in this study as the Dispute Resolution Efficiency Cycle. The Cycle has been explained in detail under section 8.5.5. The structural and contextual issues focus on the pre-project stage. The dispute system design strategies focuses on the contract formation stage where the parties agree on arrangements for future dispute resolution. The third and final sets of strategies target the actual dispute resolution stage and the post-resolution evaluation stage respectively. Improvements at each stage affect the other stages of the Cycle. Consequently, continuous improvements at each stage will eventually lead to overall improvement in the dispute resolution processes over time (see Figure 8.1). The reverse is also true. Lack of improvement at one stage will impact activities at the other stages.

10.4. Contribution to Knowledge

An original contribution to knowledge is a key criteria in judging doctoral research (Phillips and Pugh, 2005; Wellington, 2010). A study of institutional policies of twenty universities in the United Kingdom revealed that all the policies examined identified original contribution to knowledge as a key criterion for judging doctoral work (Tinkler and Jackson, 2000). The concept of making an original contribution to knowledge has been interpreted to cover various activities. Phillip and Pugh (2005) and Wellington (2012) identify nine and seven ways respectively in which originality can be demonstrated. These include conducting an empirical work that has not been done before, applying new methods or approaches to an existing area of study, using a well-known method or technique to study a new subject, employing a mixture of different methods in a study or replicating an earlier study. The contribution that this study has made to knowledge is examined from two perspectives namely, substantive contribution to the field of dispute resolution particularly in the context of infrastructure-related construction disputes and contribution to practice. Section 9.8 provides details on dissemination of the outcomes of the study.

10.4.1 Contribution to the Field of Dispute Resolution

The study has contributed to the body of knowledge on infrastructure-related construction dispute resolution in the developing world, particularly, Ghana. Prior to this inquiry, there was no known empirical research which specifically examined the extant dispute resolution processes for infrastructure-related construction disputes. The study has provided empirical evidence which addresses some of the gaps identified in the literature. For instance, the literature identified ICA as the main dispute resolution process. There was dearth of information on all the other resolution mechanisms available to parties involved in such transactions. What transpired between parties from the emergence of a dispute to its eventual submission to international arbitration remained largely unexplored. By investigating the

Ghanaian experience, this study has made available new insights into how parties to infrastructure projects in developing countries dealt with such disputes prior to resort to ICA. The study has provided a critical evaluation of the extant dispute resolution processes in Ghana. It has found that there was lack of emphasis on the use of intermediary mechanisms and third party neutrals. This implied that parties had limited dispute resolution options. Apart from providing descriptive data on the existing dispute resolution processes, the study has also explored factors which have shaped the dispute resolution processes. Again, this is the first known study on the subject in Ghana.

Much of the literature on dispute resolution from both developed and developing countries place considerable emphasis on identification of appropriate dispute resolution processes, their characteristics and how they were to be utilised (Cohen and Gould, 1998; Brown and Marriot, 1999; Hibberd and Newman, 1999; Gaitskell, 2005; Chapman, 2006; Gaitskell, 2006; Blake *et al.*, 2011). There was limited emphasis on the extent to which the dispute system design and the context in which transactions took place affected the dispute resolution processes at the back-end. The study of the Ghanaian experience has shown that effective and efficient dispute resolution is not just about the actual back-end resolution processes but also the front-end planning (which determines the systems, processes and procedures for future dispute resolution). Thus, the study has contributed to broadening understanding of factors that influence dispute resolution.

Again, whilst the literature indicated that disputes emerging from major infrastructure projects in the developed world are increasingly being resolved by less costly and formal methods such as mediation, expert determination and adjudication, there was limited information on the viability of such alternatives in the developing world. There was also lack of information on why construction disputes were not resolved by ADR methods. This study has identified a number of factors which inhibited the use of ADR methods in the Ghanaian

context (see section 7.5). Though identified in the Ghanaian context, these factors are indicative of the barriers to ADR use in other developing countries.

10.4.2 Contribution to Practice

The study has also contributed to practice in two specific ways. Firstly, it has identified some of the main characteristics and difficulties with the existing construction dispute resolution processes (see sections 8.2 and 8.3). Secondly, remedial strategies have been identified (see section 8.5). Four sets of strategies integrated into a single theoretical model called the Dispute Resolution Efficiency Cycle have been recommended. It is expected that the diagnosis of the problems with the dispute resolution processes will provide impetus for the implementation of the proposed remedial strategies.

10.5. Implications of the Research Findings

The research findings have policy, legal and institutional, and geographical implications. Firstly, the findings call for policy changes. Although further inquiry may be needed to determine the broad confines of the required changes, it is submitted that the proposed remedial strategies can be a valuable starting point. The policy must establish an overriding objective or set of objectives for all construction dispute resolution processes. It must also establish or demand the drawing up of guidelines on the use of ADR mechanisms by public institutions. The objectives and guidelines will become the reference point for dispute resolution goals of individual projects and will also provide guidance on the dispute resolution system design.

Secondly, the findings of the study imply a need for institutional and legal reforms. Streamlining institutional arrangements for dispute handling will be particularly crucial. This will involve providing guidelines on when MDAs will have to refer disputes or differences to the A-Gs and the kind of cooperation that must exist among various government institutions for purposes of dispute resolution. Legal reforms must focus on the following: (a)

streamlining the law on infrastructure procurement; (b) establishing standards for the use of dispute resolution mechanisms by public entities; (c) providing guidelines on conditions under which the use of specific dispute resolution mechanisms should be encouraged; (d) improving contract administration; (e) setting standards for contract negotiations generally and negotiation of dispute clauses in particular; (f) establishing dedicated teams responsible for specific technical disputes such as construction and engineering disputes; and (g) establishing and maintaining databases on disputes resolution. The knowledge of staff whose schedules touch on dispute resolution must be upgraded through properly tailored continuing professional development programmes, which emphasise practice. Specific measures need to be employed to deal with barriers to the use of intermediary dispute resolution mechanisms (see section 7.5).

For foreign contractors, there is the need for policy rethink. The findings suggested that contractors had two options after negotiations had failed; they either refrained from pursuing disputes against the Employer or submitted disputes to international arbitration. The consequence of the first option was that contractors could not obtain redress for disputed claims for fear of being blacklisted. For those who submitted disputes to international arbitration, the consequence was the likelihood of loss of future business opportunities. There was a middle ground which was hardly explored and encouraged by contractors, that is, using intermediary dispute mechanisms such as mediation and DABs more regularly. The findings in this study imply that contractors will need to consider the middle ground which is likely to save business relationships with the Employer and still enable them to receive due compensation for breaches.

Finally, the findings also have implications for other developing countries. As demonstrated by the literature, ICA remains the dominant resolution mechanism for infrastructure-related construction disputes in many developing countries especially those in

Africa (Cotran and Amissah, 1996; Asouzu, 2001). This study has shown that creating effective dispute resolution systems in developing countries require more than the dominant use of ICA. A holistic approach as captured by the Dispute Resolution Efficiency Cycle is required (see section 8.5.5). Firstly, developing countries need to pay attention to structural and contextual issues which shape their respective dispute resolution processes. Secondly, developing countries must pay attention to the process of dispute system design. Thirdly, there is the need for a renewed focus on dispute prevention and management in addition to resolution. This can be achieved through policy and regulatory reforms of procurement strategies and contract administration. Finally, mechanisms for post-dispute resolution evaluation should be established to draw out lessons which may eventually be useful to future projects.

10.6. Limitations of Findings

The outcomes of this study have three sets of limitations, namely geographical, methodological and subject-matter limitations.

10.6.1 Geographical Limitation

The findings of this study are primarily applicable to the resolution of construction disputes from major infrastructure projects in Ghana. However, it is worth noting that the study focused on Ghana because of certain specific characteristics such as its status as a developing country, the involvement of the State and its agencies in infrastructure development and the reliance on external funds and foreign contractors to execute projects. For developing countries which share similar characteristics as those outlined, the findings of this study will be a useful guide to further inquiries into their specific situations (see section 9.6). This argument is strengthened by the fact that grounded theory principles were used to analyse the data. This made it possible for the findings to be abstracted into concepts which can easily be identified under the systems of other jurisdictions.

10.6.2 Methodological Limitations

The findings of this inquiry are also subject to two methodological limitations namely concerns with the philosophical paradigm employed and issues of representativeness and generalisation of the findings. The interpretivist philosophical paradigm employed in this inquiry operate on the basis of the assumption that individuals or groups make meaning of their world and are able to contribute to efforts to understand it (see section 5.2.2). Social realities and their meanings are constructed by social actors as they interact with each other in their natural settings (Berger and Luckmann, 1967; Bryman, 2008). Thus, it admits of multiple accounts of social reality. Accordingly, findings of this study must be judged with the perspective of the underpinning philosophical paradigm in mind.

The limitations associated with case study research have already been examined under section 9.6). The findings of this study will be useful for naturalistic generalisation. Other developing countries who may have construction dispute resolution processes similar to those identified in this research may find the remedial strategies proposed (see section 8.5) informative and relevant to their own situation.

10.6.3 Subject-Matter Limitation

Three kinds of limitation are considered under this sub-section namely types of dispute, parties and projects. The study primarily focused on the resolution of infrastructure-related construction disputes. The process of major infrastructure procurement in developing countries is often fraught with various kinds of disputes relating to issues such as labour, land ownership, compensation claims and resettlement issues. The study did not extend to these types of disputes. Further, the investigation concentrated on main parties to major infrastructure procurement in Ghana namely the State and its agencies and foreign contractors. It is acknowledged that, disputes may and do erupt between parties other than the main parties identified above. There are instances where disputes may arise between a foreign

design firm and a foreign construction firm or a foreign contractor and a domestic subcontractor. There is also a possibility of multi-party disputes involving three or more parties (Draetta, 2011). However, the focus of the study was on construction disputes between the State or its agencies and foreign contractors.

Additionally, the study was confined to specific types of projects described as major infrastructure projects (see Chapter 2). These are public projects involving the government or its agencies as clients, and foreign contractors. Nevertheless, some transactions involving contractors incorporated in Ghana may qualify as major infrastructure projects under this study, so long as the place of central management and control of the contractor is situated outside the jurisdiction of Ghana or the transaction has significant foreign elements (see *the Balkan Energy Case*).

10.7. Self-Reflection

The need for researcher self-reflection in qualitative research has already been discussed under section 9.3.2. The drive to conduct this research was inspired by experiences from legal practice relating to effects of disputes on businesses and individuals. Approaches to dispute resolution were often adversarial and generally acrimonious. Lawyers took centre stage and drove such disputes through the quagmire of court rules sometimes to the detriment of the interest of their own clients. The observation made in relation to infrastructure-related construction dispute resolution was that, it appeared to be a matter removed from the domain of the national courts and handled exclusively outside the jurisdiction by international arbitral tribunals. These apparent emphases on litigation and international arbitration led to the question as to why disputes were handled this way. To some extent, the study was approached with an attitude that questioned the *status quo* and sought to explain the rationale for it and possible alternatives. This approach by this researcher undoubtedly influenced how the entire research was conceptualised. Again, this researcher's familiarity with the setting of the study

facilitated access to sites and the interpretation of the data. Familiarity with local jargons and cultural nuances resulted in a better appreciation of the qualitative data. Consequently, the researchers motivations, familiarity with the case and legal background undoubtedly contributed to shape the perspectives on dispute resolution expressed in this work.

Looking back at the trajectory of this research, a number of observations can be made. Firstly, the review of previous studies rightly focused on identification of the gaps in the literature. However, little was done to use the rich information from the literature to develop a conceptual map for the rest of the study. For instance, having reviewed the comparative literature on dispute resolution from developed countries, the emerging issues such as the debate on causes of dispute, dispute prevention and management and the increasing use of ADR could have been used to construct a conceptual framework earlier in the study to guide the rest of the research.

Secondly, the sampling approach adopted for this study was suitable to the nature of the problem under investigation but certain initial assumptions made about foreign contractors did not hold out. It was assumed that foreign contractors were more likely to participate in research concerning their activities than the Employer. The reverse rather turned out to be the case. The study could have benefitted from more participation of foreign contractors. Furthermore, the balance between structure and flexibility led to the choice of Patton's (1990) interview guide technique. Reflecting on the semi-structured interviews conducted, it appears that more attention was given to flexibility than structure. This resulted in the collection of rich but less structured data. This, in turn, prolonged the period for data analysis. These valuable lessons will inform the planning of future research.

Finally, time and resource constraints made validation of the research outcome by a wider population impossible (see section 9.4). Given another opportunity, a broader consultation on the outcomes of the research, preferably through focus groups, will be considered.

10.8. Recommendations for further Research

The study recommends a holistic approach to dispute resolution. Some details of how this is to be achieved will still need to be critically examined in further studies. These include the following:

- (i) cost of dispute resolution - a quantitative investigation into the cost of dispute resolution will complement the qualitative findings in this study (see section 9.4.3). The emphasis of such an inquiry may be on the quantification of the amount of money, time and energy expended on dispute resolution. Findings from such an inquiry will highlight the need to pay more attention to infrastructure-related dispute resolution;
- (ii) the extent to which streamlining institutional roles and efficient contract administration can reduce dispute occurrence and enhance dispute resolution in major infrastructure construction transactions;
- (iii) how to remove barriers to the use of ADR identified in this study. Such further studies may examine critically how to package continuing education and training for professionals and parties involved in dispute resolution so as to gradually deal with the knowledge deficiencies identified in this research;
- (iv) testing out the remedial strategies identified in this study on a live project to refine its scope and to examine its strengths and weaknesses; and
- (v) exploring the extent to which dispute resolution strategies used in collaborative procurement strategies such as partnering can enhance resolution of construction disputes within the context of Ghana and other developing countries.

Efficient dispute resolution processes can be complemented greatly by an effective dispute prevention policy. Further research in this area will be in line with developments in many

other jurisdictions (Diekmann *et al.*, 1994; Fenn, 2007; McGeorge *et al.*, 2007; Brewer, 2007; Danuri *et al.*, 2010).

This study may be replicated in other developing countries. The outcome of such further inquiries will not only add to the existing literature on the subject but also to the common pool of known cases from which emerging general principles with wider global application can be distilled (Stake, 1995).

10.9. Summary

In this chapter, the key findings, conclusions and recommendations from this study have been presented. The chapter also specifies how the objectives of the research have been met. The findings were in three parts namely the state of infrastructure-related construction dispute resolution processes in Ghana, the factors accounting for them and remedial strategies. Construction disputes were regularly resolved by Engineer's determination, negotiations and international arbitration. On limited occasions, intermediary mechanisms such as mediation and DABs were used. The process was characterised by high cost of resolution, delays, low satisfaction with international arbitration outcomes and negative effect of international arbitration on relationships between parties. It was also found that the dispute resolution processes were the product of the features, actions and context of the main parties to major infrastructure projects. The study proposes a holistic approach to efficient and effective dispute resolution. Four sets of remedial strategies have been proposed. Firstly, contextual and structural issues affecting dispute resolution need to be addressed. These include creating databases to capture past experiences, developing a specific policy on infrastructure-related construction dispute resolution with clear overriding objectives and streamlining roles of institutions involved in dispute resolution. Secondly, parties need to pay attention to the design of the dispute resolution system. Additionally, emphases need to be placed on dispute

avoidance and management in addition to dispute resolution. Finally, post-dispute resolution evaluation is critical to future improvements.

The study has made contribution to knowledge in the area of infrastructure-related dispute resolution and practice. The findings have policy, legal and institutional implications for the parties, especially, the Employer. Notwithstanding the focus on Ghana, the impact of the study is likely to be far reaching as developing countries with similar characteristics will find it a useful starting point in their own quest to address their dispute resolution challenges. Finally, the study has spawned the need for further research into several other issues such as the need to establish a framework for dispute avoidance and reduction, investigations into the actual cost of disputes and detail assessment of how barriers to the use of alternative dispute resolution can be removed.

REFERENCES

- Abd El-Razek, M., Bassioni, H. and Mubarak, A. (2008) Causes of delay in building construction projects in Egypt. *Journal of: Practical Steps towards ensuring Quality of the Research construction engineering and management*, **134**(11), pp.831-841.
- ADB, JBIC and World Bank (2005) *Connecting East Asia: A New Framework for Infrastructure*. World Bank, 1818 H Street NW, Washington, DC: World Bank/ADB/JBIC.
- Addo-Abedi, F. (1999) Sustainable development of the local contracting industry in a developing country. *Proceedings: The 2nd International Conference on Construction Industry Development and 1st Conference of CIB TG 29 on Construction in Developing Countries*. Rotterdam, The Netherlands 27-29 October. Rotterdam: The University of Edinburgh.
- Agenor, P.-R., Bayraktar, N., Aynaoui, K. and Moreira, E.P. (2005) Achieving The Millennium Development Goals In Sub-Saharan Africa: A Macroeconomic Monitoring Framework. [online]. [Access:8th June, 2011]. Available at: <<http://elibrary.worldbank.org/content/workingpaper/10.1596/1813-9450-3750>>.
- Agénor, P.-R.. and Moreno-Dodson, B. (2006) Public Infrastructure and Growth: New Channels and Policy Implications. [online]. Available at: <<http://elibrary.worldbank.org/content/workingpaper/10.1596/1813-9450-4064>>.
- Aibinu, A.A. and Odeyinka, H.A. (2006) Construction Delays and Their Causative Factors in Nigeria. *Journal of Construction Engineering & Management*, **132**(7), pp.667-677.
- Akintoye, A., Beck, M. and Hardcastle, C. (2003) *Public-private partnerships*. Wiley Online Library.
- Al-Momani, A.H. (2000) Construction delay: a quantitative analysis. *International Journal of Project Management*, **18**(1), pp.51-59.
- Ameyaw, C. (2011) *Comparative performance evaluation of the traditional design-Bid-Build (DBB) and Design-Build (DB) procurement methods in Ghana*. MSc Thesis, Kwame Nkrumah University of Science and Technology, Ghana.
- Andrés, L.A., Guasch, J.L., Haven, T. and Foster, V. (2008) *The Impact of Private Sector Participation in Infrastructure: Lights, Shadows, and the Road Ahead*. 1818 H Street NW, Washington DC 20433: The World Bank.
- Angen, M.J. (2000) Evaluating interpretive inquiry: Reviewing the validity debate and opening the dialogue. *Qualitative Health Research*, **10**(3), pp.378-395.
- Annez, P.C. (2006) Urban Infrastructure Finance from Private Operators: What Have We Learned from Recent Experience [online]. Available at: <<http://elibrary.worldbank.org/search?value1=infrastructure+projects&option1=keyw>ords>.
- Anvuur, A., Kumaraswamy, M. and Male, S. (2006) Taking forward public procurement reforms in Ghana. *CIB W107 Construction in Developing Economies International Symposium - "Construction in Developing Economies: New Issues and Challenges"* Santiago, Chile 18th – 20th January, 2006. Santiago.
- Arrowsmith, S. (2005) *The Law of Public and Utilities Procurement*. 2nd ed. London: Sweet and Maxwell.
- Arrowsmith, S. (ed.) (2010) *Public Procurement Regulation: An Introduction*. EU Asia Inter-University Network for Teaching and Research in Public Procurement Regulation Consortium. [Accessed 20th August, 2011]. Available at: <<http://www.nottingham.ac.uk/pprg/documentsarchive/asialinkmaterials/publicprocurementregulationintroduction.pdf>>.

- Arthurs, H. (1983) *Consultative Group on Research and Education in Law, Law and Learning: Report to the Social Sciences and Humanities Research Council of Canada*. Ottawa: Minister of Supply and Services.
- Asante, S.K.B. (1993) The perspectives of African countries on international commercial arbitration. *Leiden Journal of International Law*, **6**(02), pp.331-356.
- Asante, S.K.B. (1998) Some Key Issues in Negotiating International Joint Ventures. *Banking and Financial Law Journal of Ghana*, **1**(1), pp.52-71.
- Aschauer, D.A. (1989) Is public expenditure productive? *Journal of Monetary Economics*, **23**(2), pp.177-200.
- Asiedu, W. (2009) *Assessing Construction Project Performance in Ghana: Modelling Practitioners' and Clients' Perspectives*. PhD. Thesis, Technology Universiteit Eindhoven.
- Asouzu, A.A. (2001) *International commercial arbitration and African states: practice, participation, and institutional development*. Cambridge Univ Pr.
- Asouzu, A.A. (2006) Some Fundamental Concerns and Issues about International Arbitration in Africa. *African Development Bank Law Development Review*, **Vol. 1**, p.p.81.
- Baah, A.Y. and Jauch, H. (2009) Chinese investments in Africa. *Chinese Investments in Africa: A Labour Perspective*, p.35.
- Bassioni, H.A., El-Razek, M.E.A. and El-Salam, W.A.A. (2007) Avoiding Claims in Egyptian Construction Projects: A Quantitative Survey. In: Boyd, D (Ed) Procs 23rd Annual Association of Researchers in Construction Management,(ARCOM) Conference Belfast, UK 3-5 September 2007, pp.147-156.
- Berger, P.L. and Luckmann, T. (1967) *The social construction of reality*. Doubleday, New York.
- Bernal, D.S. (2009) International Arbitration in Latin America. *National Law Center for Inter-American Free Trade*, May, **15**.
- Bernard Krief Consultants (2006) *Europe and the new partnerships for the Construction and Civil Engineering sector in Africa (Central and West Africa – CWA)*. Pro€Invest – CDE.
- Blackaby, N., Partasides, C., Redfern, A. and Hunter, M. (2009) *Redfern and Hunter on international arbitration*. Oxford Univ Pr.
- Blake, S.H., Browne, J. and Sime, S. (2011) *A practical approach to alternative dispute resolution*. Oxford University Press.
- Blumer, H. (1969) *Symbolic Interactionism: Perspective and Method*. Englewood Cliffs, NJ: Prentice Hall.
- Blunt D. and Osborne, R. (2011) back to basics. *Computers & Law*, pp.32-35.
- Bockstiegel, K.-H. (1999) Practical problems in resolving disputes in an international construction and infrastructure project. *International Business Lawyer*, pp.196-199.
- Bower, D. (2003) *Management of procurement*. Thomas Telford Services Ltd.
- Bresnen, M. and Marshall, N. (2000) Partnering in construction: a critical review of issues, problems and dilemmas. *Construction management and economics*, **18**(2), pp.229-238.
- Brett, J.M., Goldberg, S.B. and Ury, W.L. (1990) Designing systems for resolving disputes in organizations. *American Psychologist*, **45**(2), p.162.
- Briceno-Garmendia, C., Estache, A. and Shafik, N. (2004) Infrastructure Services in Developing Countries: Access, Quality, Costs and Policy Reform. *World Bank*.
- Bristow, D.I. (1995) The new CCDC 2: facilitating dispute resolution of construction projects. *Construction Law Journal*, **11**(2), pp.95-117
- Brinberg, D. and McGrath, J.E. (1985) Validity and the research process.

- Brooker, P. (2007) An investigation of evaluative and facilitative approaches to construction mediation. *Structural Survey*, **25**(3/4), pp.220-238.
- Brown, H.J. and Marriott, A.L. (1999) *ADR principles and practice*. London: Sweet & Maxwell, pp.xxxvi, 457 p.
- Brown, H.J. and Marriott, A.L. (2012) *ADR: principles and practices*. London: Sweet & Maxwell.
- Bryman, A. (2008) *Social research methods*. 3rd ed. ed. Oxford: Oxford University Press, pp.xlii, 748 p.
- C.I.B (1997) Partnering in the Team. *CIB Great Britain, Working Group*, **12**.
- Calderón, C. and Servén, L. (2010) Infrastructure and Economic Development in Sub-Saharan Africa. *Journal of African Economies*, **19**(suppl 1), pp.i13-i87.
- Calderón, C. and Servén, L. (2010) Infrastructure in Latin America. in Ocampo, J. A. and Ros, J. (eds.) *Handbook of Latin American Economies* Oxford, UK: Oxford University Press.
- Canning, D. and Pedroni, P. (1999) Infrastructure and long run economic growth. *Consulting Assistance on Economic Reform II Discussion Paper*, **57**.
- Capper, P. and Bunch, A. (1998) Construction Industry Arbitrations. in Bernstein, R., Tackaberry, J., Marriott, A. and Wood, D. (eds.) *Handbook of Arbitration Practice*. London: Sweet & Maxwell, pp.335-372.
- Chan, E.H.W. and Suen, H. (2005) Dispute Resolution Management for International Construction Projects in China *Journal of Management Decision*, **Vol.43 (2)**, pp.589-602.
- Chan, E.H.W., Suen, H. and Chan, K.L. (2006) A MAUT-based Dispute Resolution Selection Model Prototype for International Construction Projects, . *J. Constr. Engrg and Mgmt.* , **Vol. 132**, (No. 5,), pp. pp.444-451.
- Chapman, P. (2006) Dispute Boards on major infrastructure projects. *Management, Procurement and Law*, **162**.
- Chappell, D., Powell-Smith, V. and Marshall, D. (2001) *Building contract dictionary*. Wiley-Blackwell.
- Charmaz, K. (2006) *Constructing grounded theory: A practical guide through qualitative analysis*. Sage Publications Ltd.
- Chen, C., Chiu, P., Orr, R. and Goldstein, A. (2007) *An empirical analysis of Chinese construction firms' entry into Africa*. Sydney, Australia.
- Cheung, S.O. (1999) Critical factors affecting the use of alternative dispute resolution processes in construction. *International Journal of Project Management*, **17**(3), pp.189-194.
- Cheung, S.-O. and Yeung, Y.-W. (1998) The effectiveness of the dispute resolution advisor system: a critical appraisal. *International Journal of Project Management*, **16**(6), pp.367-374.
- Cheung, S.O. and Yiu, K.T. (2007) A study of construction mediator tactics—Part I: Taxonomies of dispute sources, mediator tactics and mediation outcomes. *Building and environment*, **42**(2), pp.752-761.
- Cheung, S.O. and Yiu, T.W. (2006) Are construction disputes inevitable? *Engineering Management, IEEE Transactions on*, **53**(3), pp.456-470.
- Chynoweth, P. (2008) Legal research. in Knight, A. and Ruddock, L. (eds.) *Advanced Research Methods in the Built Environment*, Wiley-Blackwell, Oxford. Ley-Blackwell, pp.28-38.
- Clamp, H., Cox, S. and Lupton, S. (2007) *Which Contract?: Choosing the Appropriate Building Contract*. RIBA Publishing.

- Clark, D.P. (1992) Distributions of official development assistance among developing country aid recipients. *The Developing Economies*, **30**(3), pp.189-197 at p. 190.
- Cohen, M. and Gould, N. (1998) ADR: appropriate dispute resolution in the UK construction industry. *Civil Justice Quarterly*, **17**(Apr), pp.103-127.
- Conbere, J. P. (2001). Theory building for conflict management system design. *Conflict Resolution Quarterly*, **19**(2), 215-236.
- Conlin, J., Langford, D. and Kennedy, P. (1996), *The relationship between construction procurement strategies and construction contract disputes*. **1** Taylor & Francis, p. 360.
- Constantino, C.A. and Merchant, C.S. (1996) *Designing conflict management: A guide to creating productive and healthy organizations*. Jossey-Bass.
- Construction Industry Institute (1991) *In Search of partnering Excellence*, CII Special Publication Austin, TX: Construction Industry Institute.
- Corbin, J.M. and Strauss, A. (1990) Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, **13**(1), pp.3-21.
- Corbin, J.M. and Strauss, A.L. (2008) *Basics of qualitative research: techniques and procedures for developing grounded theory*. 3rd ed. ed. Thousand Oaks, Calif.: Sage Publications, Inc., pp.xv, 379 p.
- Cotran, E. and Amisshah, A. (1996) *Arbitration in Africa*. Kluwer Law International.
- Cowan, C.E. (1991) *A strategy for partnering in the public sector*. ASCE, pp. 721-726.
- Creswell, J.W. (2007) *Qualitative inquiry & research design: Choosing among five approaches*. Sage Publications, Inc.
- Creswell, J.W. (2009) *Research design: Qualitative, quantitative, and mixed methods approach*. Sage Publications, Inc.
- Creswell, J.W. and Miller, D.L. (2000) Determining validity in qualitative inquiry. *Theory into practice*, **39**(3), pp.124-130.
- Critchlow, J. (1998) *Making partnering work in the construction industry*. Chandos.
- Crotty, M. (1998) *The foundations of social research: Meaning and perspective in the research process*. Sage Publications Ltd.
- Crowley, L.G. and Karim, M. (1995) Conceptual model of partnering. *Journal of management in engineering*, **11**(5), pp.33-39.
- Daily Graphic (2012) Judgment Debt Sole Commissioner Appointed. *Daily Graphic* [online]. [Accessed 9th October, 2012]. Available at: <graphic.com.gh>.
- Daily Graphic (2013) Ghana paid GH¢218 million in judgment debts in 2011. *Daily Graphic* [online]. Available at: <<http://edition.myjoyonline.com/pages/news/201302/101122.php>>.
- Denscombe, M. (2007) *The good research guide: for small-scale social research projects*. Open University Press.
- Denzin, N.K. (1978) *The research act: A theoretical orientation to sociological methods*. New York: McGraw-Hill.
- Denzin, N.K. and Lincoln, Y.S. (2000) The discipline and practice of qualitative research. *Handbook of qualitative research*, **2**, pp.1-28.
- Denzin, N.K. and Lincoln, Y.S. (2005) *The Sage handbook of qualitative research*. Sage Publications, Inc.
- Denzin, N.K. and Lincoln, Y.S. (2008) *Collecting and interpreting qualitative materials*. Sage.
- Dey, I. (2004) Grounded Theory in Seale, C., Gobo, G., Gubrium, J. F. and Silverman, D. (eds.) *Qualitative research practice*. Sage Publications Ltd.
- DFID (2011) Multilateral Aid Review- Ensuring Maximum Value for money for UK Aid through Multilateral Organisations, DFID[online].[Accessed 31 August,2011].

- Available at:
http://www.dfid.gov.uk/Documents/publications1/mar/multilateral_aid_review.pdf.
- Diekmann, J.E. and Girard, M.J. (1995) Are Contract Disputes Predictable? *Journal of Construction Engineering & Management*, **121**(4), p.355.
- Diekmann, J.E. and Nelson, M.C. (1985) Construction claims: frequency and severity. *Journal of construction engineering and management*, **111**(1), pp.74-81.
- Diekmann, J.E., Girard, M.J. and Abdul-Hadi, N. (1994) *DPI--disputes Potential Index: A Study into the Predictability of Contract Disputes*. The Institute.
- Diekmann, J.E., Girard, M.J. and Abdul-Hadi, N. (1994) *DPI--disputes Potential Index: A Study Into the Predictability of Contract Disputes*. The Institute.
- Dixon, B.R., Bouma, G.D. and Atkinson, G.B.J. (1987) *A handbook of social science research*. Oxford University Press Oxford.
- Draetta, U. (2011) Dispute resolution in international construction linked contracts. *International Business Law Journal*, (1), pp.69-83.
- DRBF (2012) Database on the Use of DRB by Country -2006*.
- Dundas, H.R. (2008) Expert determination: recent developments and the effective way forward in energy disputes. *International Energy Law Review*, (5), pp.162-168.
- Egan, J. (1998) *Rethinking Construction*. London: Department of the Environment, Transport and the Regions.
- Egan, J. (2002) *Accelerating Change*. London: Department of the Environment, Transport and the Regions.
- Ehrenhaft, P.D. (1977) Effective International Commercial Arbitration. *Law & Pol'y Int'l Bus.*, **9**, p.1191.
- Estache, A. (2004) *A selected survey of recent economic literature on emerging infrastructure policy issues in developing countries*. The World Bank.
- Estache, A. and Fay, M. (2007) Current Debates On Infrastructure Policy. [online]. pp.1-43. Available at: <http://elibrary.worldbank.org/content/workingpaper/10.1596/1813-9450-4410>.
- Estache, A. and Vagliasindi, M. (2007) *Infrastructure for accelerated growth for Ghana: needs and challenges*.
- Eyiah, A.K. and Cook, P. (2003) Financing small and medium-scale contractors in developing countries: a Ghana case study. *Construction Management and Economics*, **21**(4), pp.357-367.
- Fellows, R. and Liu, A. (2008) A Culture-based Approach to the Management of Conflict on Multi-national Construction Projects: Participants and Performance. *International Conference on Multi-national Projects - 'Securing high Performance through Cultural awareness and Dispute Avoidance'*. Shanghai, China 21st -23rd November, 2008. Shanghai.
- Fenn, P. (2002) *Why construction contracts go wrong (or an aetiological approach to construction disputes)*. A paper delivered at a meeting of the Society of Construction Law in Derbyshire on 5th March.
- Fenn, P. (2007) Predicting construction disputes: an aetiological approach. *Proceedings of the ICE - Management, Procurement and Law* [online]. **160**, pp.69-73. Available at: <http://www.icevirtuallibrary.com/content/article/10.1680/mpal.2007.160.2.69>.
- Fenn, P. and Gameson, R. (1992) *Construction conflict management and resolution*. Taylor & Francis.
- Fenn, P., Davies, E. and O'Shea, M. (1998) *Dispute resolution and conflict management in construction: an international review*. Taylor & Francis.
- Fenn, P., Lowe, D. and Speck, C. (1997) Conflict and dispute in construction. *Construction Management and Economics*, **15**(6), pp.513-518.

- Fink, A. (2002) *The Survey Kit* (2nd ed.). Thousand Oaks, CA; Sage
- Flyvbjerg, B. (2006) Five misunderstandings about case-study research. *Qualitative inquiry*, **12**(2), p.219.
- Foster, V. and Briceño-Garmendia, C. (2010) *Africa's Infrastructure: A Time for Transformation*. 1818 H Street, NW, Washington, DC 20433: The World Bank/ Agence Française de Développement.
- Foster, V. and Pushak, N. (2011) *Ghana's Infrastructure: A Continental Perspective* The World Bank.
- Foster, V., Butterfield, W., Chen, C. and Pushak, N. (2009) *Building Bridges: China's Growing Role as Infrastructure Financier for Sub-Saharan Africa*. 1818 H Street NW, Washington DC 20433: The World Bank/PPIAF, p. xi.
- Franks, J. (1998) *Building Procurement Systems - A Client's guide*. 3rd ed. Ascot: Chartered Institute of Building/ Englemere Limited.
- Fryer, B.E. and Ellis, C. R. and Gorse, C.(2004) *The practice of construction management*. Oxford, Blackwell Publishing.
- Fuest, V. and Haffner, S.A. (2007) PPP-policies, practices and problems in Ghana's urban water supply. *Water Policy*, **9**(2), pp.169-192.
- Fuller, L. (1971) Mediation- Its Forms and Functions. *S. Cal. L. Review*, **44**, pp.305 at 308-309.
- Gaitskell, R. (2005) Current trends in dispute resolution. *Arbitration*, **71**(4), pp.288-299.
- Gaitskell, R. (2006) *Engineer's dispute resolution handbook*. Thomas Telford.
- Gerber, P. and Rogers, L. (2000) The Changing Face of Construction Dispute Resolution in the International Arena: Where to From Here? *Australian Construction Law Newsletter* (73).
- Ghana Statistical Service (2012) *Revised Gross Domestic Product 2011*. Accra: GSS.
- Ghana Water Company Limited (2011) *Projects - Tamale Water Supply Expansion* [online]. [Accessed 22/11/11]. Available at: <<http://www.gwcl.com.gh/projects.php>>.
- Giang, D.T.H. and Sui Pheng, L. (2011) Role of construction in economic development: Review of key concepts in the past 40 years. *Habitat International*, **35**(1), pp.118-125.
- Glaser, B.G. (1978) *Theoretical sensitivity: advances in the methodology of grounded theory*. Sociology Press, Mill Valley, CA.
- Glaser, B.G. and Holton, J. (2004) Remodeling grounded theory. *FQS*, **5**(2).
- Glaser, B.G. and Strauss, A.L. (1967) The discovery of grounded theory. *The British Journal of Sociology*, **20**(2).
- GOG (2011) National Policy on Public Private Partnerships [online]. Accra: MOFEP.
- Gould, N. (1999) Dispute resolution in the UK construction industry: processes, perceptions and predictions. *International Construction Law Review*, pp.574-587.
- Government of Ghana (2008) Budget Statement and Economic Policy of the Government of Ghana for the 2009 Financial Year. Accra: Government Publishers/Assembly Press.
- Government of Ghana (2009) Budget Statement and Economic Policy of the Government of Ghana for the 2010 Financial Year. Accra: Government Publishers/Assembly Press.
- Government of Ghana (2010) Budget Statement and Economic Policy of the Government of Ghana for the 2011 Financial Year. Accra: Government Publishers/Assembly Press.
- Government of Ghana (2011) *Ministry of Water Resources, Works and Housing* [online]. [Accessed 23/11/11]. Available at: <http://www.ghana.gov.gh/index.php?option=com_content&view=article&id=324:ministry-of-water-resources-works-a-housing&catid=74:ministries&Itemid=224>.
- Griffith, A., Knight, A. and King, A. (2003) *Best practice tendering for design and build projects*. Institute of Civil Engineers Pub.

- Groton, J.P. (1992) *Supplementary to Alternative Dispute Resolution in the Construction Industry*. USA: Wiley Law Publications.
- Guba, E.G. and Lincoln, Y.S. (1994) Competing paradigms in qualitative research. *Handbook of qualitative research*, **2**, pp.163-194.
- Gubrium, J.F. and Holstein, J.A. (2002) *Handbook of interview research: Context and method*. SAGE Publications, Incorporated.
- Hammersley, M. (1993) *Social research: philosophy, politics and practice*. Sage Publications Ltd.
- Hanna, A.S. (2007) Risk Allocation and Increased Claims in the Construction Industry. *Journal of Professional Issues in Engineering Education & Practice* (133 ed.). pp.43-44.
- Harmon, K.M. (2003) Resolution of construction disputes: A review of current methodologies. *Leadership and Management in Engineering*, **3**(4), pp.187-201.
- Harmon, K.M.J. (2009) Case Study as to the Effectiveness of Dispute Review Boards on the Central Artery/Tunnel Project. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, **1**, p.18.
- Harris, C. (2003) *Private participation in infrastructure in developing countries: trends, impacts, and policy lessons*. World Bank Publications.
- Hawker, G., Uff, J. and Timms, C. (1986) *The Institution of Civil Engineers' Arbitration Practice*. Telford.
- Heath, B., Hills, B. and Berry, M. (1994) The origin of conflict within the construction process.
- Hensengerth, O. (2011) *Interaction of Chinese institutions with host governments in dam construction -The Bui dam in Ghana*. Bonn: Deutsches Institut für Entwicklungspolitik.
- Herrmann, G. (1983) UNCITRAL's Work Towards a Model Law on International Commercial Arbitration. *Pace L. Rev.*, **4**, p.537.
- Hibberd, P.R. and Newman, P. (1999) *ADR and adjudication in construction disputes*. Wiley-Blackwell.
- Hinchey, J.W. (2012) Rethinking Conflict In Construction Project Delivery and Dispute Resolution. *International Construction Law Review*, **29**(1), pp.24-50.
- Hobeck, P., Mahnken, V. and Koebke, M. (2008) Time for Woolf reforms in international construction arbitration. *International Arbitration Law Review*, **11**(2), pp.84-99.
- Hoellering, M.F. (1986) The UNCITRAL Model Law on International Commercial Arbitration. *International Law* **20**, p.327.
- ICSID (2011) *The ICSID Caseload – Statistics*.
- Iltter, D. (2012) Identification of the relations between dispute factors and dispute categories in construction projects. *International Journal of Law in the Built Environment*, **4**(1), pp.45-59.
- Jepma, C.J. (1991) *The tying of aid*. Development Centre of the Organisation for Economic Co-operation and Development; Washington, DC: OECD Publications and Information Centre [distributor].
- Jones, D. (2006) Construction project dispute resolution: options for effective dispute avoidance and management. *Journal of Professional Issues in Engineering Education and Practice*, **132**(3), pp.225-235.
- Kessides, C. (1993) *The contributions of infrastructure to economic development: a review of experience and policy implications*. World Bank Publications.
- Kessides, I.N. (2004) *Reforming infrastructure: Privatization, regulation, and competition*. A World Bank Publication.

- Kheni, N.A. (2008) *Impact of Health and Safety Management on safety Performance of Small and Medium-sized Construction Businesses in Ghana* [online]. PhD, Loughborough. [Accessed 24th October, 2011]. Available at: <<https://dspace.lboro.ac.uk/>>.
- Kirkpatrick, C., Parker, D.S. and Zhang, Y.-F. (2006) foreign direct investment in infrastructure in developing countries: does regulation make a difference? *Transnational Corporation*, **15**(1), pp.143-171.
- Kratzsch, S. (2010) ICC Dispute Resolution Rules: ICC dispute boards and ICC Pre-Arbitral Referees. *Construction Law Journal*, **26**(2), pp.87-97.
- Kumaraswamy, M. and Yogeswaran, K. (1998) Significant sources of construction claims. *Int. Constr. Law Rev.*, **15**(1), pp.144-160.
- Kumaraswamy, M.M. (1997) Common categories and causes of construction claims. *Construction Law Journal*, **13**(1), pp.21-34
- Latham, M. (1994) *Constructing the Team - Joint Review of Procurement and Contractual Arrangements in the United Kingdom Construction Industry: Final Report*. London: Department of the Environment.
- Le Nguyen, H. (2011) Partnership Strategies: Pro-active and Pre-active Approach in Conflict Management in International Joint Ventures. *International Journal of Business & Management*, **6**(9).
- Leahy, E.R. and Pierce, K.J. (1985-86) Sanctions to Control Party Misbehavior in International Arbitration. *Va. J. Int'l L.*, **26**, pp.291, 293.
- LeCompte, M.D. and Goetz, J.P. (1982) Problems of reliability and validity in ethnographic research. *Review of educational research*, **52**(1), p.31.
- Levin, A. (1998) PFI contracts: providing for disputes and choosing the "right" remedies. *Journal of International Banking Law*, **13**(6), pp.193-198.
- Lincoln, Y. and Guba, E. (1985) *Naturalistic Inquiry* (Beverly Hills, CA, Sage Publications). Linda Snyder and Sarah Bowman, **117**.
- Lincoln, Y.S. and Guba, E.G. (2000) The only generalization is: There is no generalization. *Case study method*, pp.27-44.
- Love, P., Davis, P., Ellis, J. and Cheung, S.O. (2010) Dispute causation: identification of pathogenic influences in construction. *Engineering, Construction and Architectural Management*, **17**(4), pp.404-423.
- Love, P., Davis, P., Jasper, T., Lopez, R., Tresise, P. and Ellis, J. (2009) Causal ascription of disputes in construction projects. Disputes Avoidance and Resolution Program, CRC Construction Innovation, Report, (2007-006).
- Love, P.E.D., Davis, P.R., Ellis, J.M. and Cheung, S. (2010) A systemic view of dispute causation. *International Journal of Managing Projects in Business*, **3**(4), pp.661-680.
- Love, P.E.D., Davis, P.R., Sai On, C. and Irani, Z. (2011) Causal Discovery and Inference of Project Disputes. *Engineering Management, IEEE Transactions on*, **58**(3), pp.400-411.
- Love, P.E.D., Skitmore, M. and Earl, G. (1998) Selecting a suitable procurement method for a building project. *Construction Management & Economics*, **16**(2), pp.221-233.
- Mahama, A. (22 March, 2012) Duffuor Fingers Betty. In CP's €94m Cash. *Daily Guide* [online]. [Accessed 9th October, 2012]. Available at: <<http://www.dailyguideghana.com/?p=42818>>.
- Mante, J. and Ndekugri, I. (2012) Arbitrability in the Context of Ghana's New Arbitration Law. *International Arbitration Law Review*, **15**(2), pp.31-41.
- Mante, J., Ndekugri, I., Ankrah, N. and Hammond, F. (2012) The Influence of Procurement Methods on Dispute Resolution Mechanism Choice in Construction In: Smith, S.D (Ed) Proceedings 28th Annual ARCOM Conference, 3-5 September 2012, Edinburgh, UK, Association of Researchers in Construction Management, 979-988. [online].

- Mante, J., Ndekugri, I. and Ankrah, N. (2011) Resolution of Disputes arising from major infrastructure projects in developing countries. In RICS Construction and Property Conference. School of Built Environment, Salford 12 -13 September, 2011. Salford, UK, p.126.
- Marshall, C. and Rossman, G.B. (2006) *Designing qualitative research*. 4th ed. Sage Publications, Inc.
- Mason, M. (2010) Sample Size and Saturation in PhD Studies Using Qualitative Interviews. In Forum: Qualitative Social Research (Vol. 11, No. 3) **11**.
- Masterman, J.W.E. (2002) *Introduction to building procurement systems*. Taylor & Francis.
- Mathison, S. (1988) Why triangulate? *Educational researcher*, **17**(2), pp.13-17.
- Matyas, R.M., Mathews, A., Smith, R.J. and Sperry, P. (1996) *Construction dispute review board manual*. McGraw-Hill New York.
- McLaughlin, J.T. (1979) Arbitration and Developing Countries. *Int'l Law*, **13**, p.211.
- McMillan, D.D. and Rubin, R.A. (2005) Dispute Review Boards: Key Issues, Recent Case Law, and Standard Agreements. *Constr. Law.*, **25**, p.14.
- Menkel-Meadow, C., Love, L.P. and Schneider, A.K. (2005) *Dispute resolution: beyond the adversarial model*. New York: Aspen Publishers, pp. 1, 993 p.
- Micheletti (2011) *Projects* [online]. [Accessed 21st November, 2011]. Available at: <<http://michelettighana.com/projects.php>>.
- Miller, R. and Lessard, D.R. (2000) *The strategic management of large engineering projects: Shaping institutions, risks, and governance*. The MIT Press.
- Miles, M.B. and Huberman, A.M. (1984) *Qualitative data analysis: A sourcebook of new methods*. Sage publications.
- Mitropoulos, P. and Howell, G. (2001) Model for understanding, preventing and resolving project disputes. *Journal of Construction Engineering & Management*, **127**(3), p.223.
- Moavenzadeh, F. (1978) Construction industry in developing countries. *World Development*, **6**(1), pp.97-116.
- MOFEP (1997) Public Expenditure Review 1996 - The Delivery of Economic Infrastructure [online]. Accra: MOFEP.
- MOFEP (2011) *MOFEP-Functions* [online]. [Accessed 10th November, 2011]. Available at: <<http://www.mofep.gov.gh/>>.
- Morgan, D.B. (2008) *Dispute Avoidance: A non-confrontational approach to the management of construction contracts*. RIBA Publishing.
- Morledge, R., Smith, A. and Kashiwagi, D.T. (2006) *Building procurement*. Wiley-Blackwell.
- Morse, J.M. (1999) Qualitative generalizability. *Qualitative Health Research*, **9**(1), pp.5-6..
- Morse, J.M. (2000) Determining sample size. *Qualitative Health Research*, **10**(1), pp.3-5.
- Mottier, V. (2005) The interpretive turn: History, memory, and storage in qualitative research. *Forum: Qualitative Social Research*, **6**(No.2), pp.2-05.
- Murdoch, J. and Hughes, W. (2008) *Construction contracts: law and management*. Routledge.
- National Audit Office (2001) *Modernizing Construction (HC87 Session 2000-2001)*. London: National Audit Office.
- Ncube, M. (2010) Financing and Managing Infrastructure in Africa. *Journal of African Economies*, **19**(suppl 1), pp.114-164.
- Ndekugri, I. and Russell, V. (2006) Disputing the existence of a dispute as a strategy for avoiding construction adjudication. *Engineering, Construction and Architectural Management*, **13**(4), pp.380-395.
- Ndekugri, I. and Turner, A. (1994) Building procurement by design and build approach. *Journal of Construction Engineering and Management*, **120**, p.243.

- Ndekugri, I., Chapman, P., Smith, N. and Hughes, W. (2013) Best Practice in the Training, Appointment and Remuneration of Members of Dispute Boards for Large Infrastructure Projects. *Journal of Management in Engineering*.
- Ndekugri, I., Smith, N. and Hughes, W. (2007) The engineer under FIDIC's conditions of contract for construction. *Construction Management and Economics*, **25**(7), pp.791-799.
- Ndekugri, I.E., and Rycroft, M.E. (2009) *The JCT 05 Standard Building Contract: Law and Administration*. Elsevier/Butterworth-Heinemann.
- Nelson, R.M. (2010) Multilateral Development Banks: Overview and Issues for Congress [online]. Washington, USA: Congressional Research Service, United States of America
- Neuman, W.L. (2003) *Social work research methods: Qualitative and quantitative approaches*. Allyn and Bacon.
- Newey, J. (1992) The construction industry In Fenn, P. and Gameson, R. (ed.) *Construction Conflict Management and Resolution*. E & FN SPON.
- Odams, A.M. and Higgins, J. (eds.) (1996) *Commercial Dispute Resolution*. Construction Law Press.
- Ogunlana, S.O., Promkuntong, K. and Jearkijrm, V. (1996) Construction delays in a fast-growing economy: comparing Thailand with other economies. *International Journal of Project Management*, **14**(1), pp.37-45.
- Oh, B.S. (1981) Some Problems in International Commercial Arbitration with Developing Countries. *Seoul Law Journal*, pp.144- 173.
- Osotimehin, K.O., Akintoye, E.Y. and Olasanmi, O.O. (2010) The Effects of Investment in Telecommunication Infrastructure on Economic Growth in Nigeria (1992-2007). *Oxford Business and Economics Conference*. St. Hugh's College, Oxford University 28th - 29th June, 2010. Oxford, UK.
- Parliament of Ghana (29 February, 2012) *The Hansard: Public Account Committee Sitting - Consideration of the Report of the Auditor-General on the Public Accounts of Ghana (Consolidated Fund), 2009*. Accra: Parliament of Ghana.
- Patton, M.Q. (1990) *Qualitative evaluation and research methods*. SAGE Publications, Inc.
- Paulsson, J. (1996) Accepting International Arbitration in fact- And not only in words. in Cotran, E. and Amissah, A. (eds.) *Arbitration in Africa*. London: Kluwer Law International, pp.31-45.
- Pearce, D.C., Campbell, E. and Harding, D. (1987) *Australian law schools: A discipline assessment for the Commonwealth Tertiary Education Commission*. AGPS Canberra, pp.paras 9.10 - 19.15.
- PEI (February, 2011) *Infrastructure Investor Africa: An Intelligence Report*. London: PEI Media.
- Perloff, S. (1992) Ties that Bind: The Limits of Autonomy and Uniformity in International Commercial Arbitration, The. *U. Pa. J. Int'l Bus. L.*, **13**, p.323.
- Phillips, E.M. and Pugh, D.S. (2005) *How to get a PhD: A handbook for students and their supervisors*. 4th ed. Berkshire, England: Open University Press, pp.61-62.
- Poole, J. (2012) *Textbook on contract law*. 11th ed. OUP Oxford.
- Popper, K. (1959). *The logic of scientific discovery*. New York: Basic Books.
- Powell-Smith, V. and Stephenson, D.A. (1999) *Civil engineering claims*. Wiley-Blackwell.
- Prud'Homme, R. (2004) *Infrastructure and development*. World Bank.
- Pyett, P.M. (2003) Validation of qualitative research in the “real world”. *Qualitative Health Research*, **13**(8), pp.1170-1179.
- Rana, R. (2009) Is Adjudication killing Arbitration. *Arbitration*, **75**(2), pp.223-230.

- Redfern, A. (2004) *Law and practice of international commercial arbitration*. Sweet & Maxwell.
- Rosenfeld, Y. (2014) Root-cause analysis of construction-cost overruns. *Journal of Construction Engineering and Management*, 140(1).
- Ross, D. (2009) The use of partnering as a conflict prevention method in large-scale urban projects in Canada. *International Journal of Managing Projects in Business*, 2(3), pp.401-418.
- Rubin, H.J. and Rubin, I. (1995) *Qualitative interviewing: The art of hearing data*. Sage Publications, Inc.
- Sanchez Robles, B. (1998) Infrastructure investment and growth: some empirical evidence. *Contemporary Economic Policy*, 16(1), pp.98-108.
- Sanders (1973) International Commercial Arbitration. *Neth. Int'l L. Rev*, 20, p.37.
- Sarkodie, K. (2011) Arbitration in Ghana- The Alternative Dispute Resolution Act, 2010. *International Construction Law Review*.
- Schwandt, T.A. (2007) *The Sage dictionary of qualitative inquiry*. Sage Publications, Inc.
- Schwartz, E.A. (1995) Resolution of International Construction Disputes. *Int'l Bus. Law*, 23, p.149.
- Seawright, J. and Gerring, J. (2008) Case selection techniques in case study research. *Political Research Quarterly*, 61(2), pp.294-308.
- Sempasa, S.L. (1992) Obstacles to international commercial arbitration in African countries. *International & Comparative Law Quarterly*, 41(02), pp.387-413.
- Semple, C., Hartman, F.T. and Jergeas, G. (1994) Construction claims and disputes: causes and cost/time Overruns. *Journal of construction engineering and management*, 120(4), pp.785-795.
- Seppala, C. (2005) The Arbitration Clause in FIDIC Contracts for Major Works. *International Construction Law Review*, 22.
- Seppala, C.R. (2009) The pre-arbitral procedure of the settlement of disputes in the FIDIC (civil engineering) conditions of contract. *International Business Law Journal*, (6), pp.579-606.
- Sime, S. (2007) *A practical approach to civil procedure*. Oxford University Press, USA.
- Sims, J. and Bunch, T. (2003) Construction Industry Arbitrations. in Tackaberry, J. and Marriott, A. L. (eds.) *Bernstein's Handbook of Arbitration and Dispute Resolution Practice*. Fourth ed. London: Sweet & Maxwell, pp.533-589.
- Smith, S. and Martinez, J. (2009) Analytic Framework for Dispute Systems Design, An. *Harv. Negot. L. Rev.*, 14, p.123.
- Stake, R.E. (1995) *The art of case study research*. Sage Publications, Inc.
- Stehbens, K.L., Wilson, O.D. and Skitmore, M. (1999) Partnering in the Australian construction industry: breaking the vicious circle.
- Stitt, A. (2004) *Mediation: a practical guide*. Routledge Cavendish.
- Strauss, A. and Corbin, J. (1998) Basics of qualitative research: Techniques and procedures for developing grounded theory. *SAGE Publications, Thousand Oaks, USA*.
- Sykes, J. (1996) Claims and disputes in construction. *Construction Law Journal*, 12(1), pp.3-13.
- Tackaberry, J. and Marriott, A.L. (2003) *Bernstein's Handbook of Arbitration and Dispute Resolution Practice*. Fourth ed. London: Sweet & Maxwell.
- Taysec (2011) *Projects* [online]. [Accessed 21st November,2011]. Available at: <http://www.taysec.net/gh/?page=Design+and+Build&page_id=21>.
- Thompson, R.M. and Vorster, M.C. (2000) Innovations to Manage Disputes: DRB AND NEC. *Journal of Management in Engineering*, 16(5), p.51.

- Tiewul, S.A. and Tsegah, F.A. (1975) Arbitration and the Settlement of Commercial Disputes: A Selective Survey of African Practice. *International & Comparative Law Quarterly*, **24**(03), pp.393-418.
- Tinkler, P. and Jackson, C. (2000) Examining the Doctorate: Institutional policy and the PhD examination process in Britain. *Studies in Higher Education*, **25**(2), pp.167-180.
- Torgbor, E. (2011) Ghana outdoors: the new Alternative Dispute Resolution Act 2010 (Act 798): a brief appraisal. *Arbitration*, **77**(2), pp.211-291 at 212.
- Turner, A. (1990) *Building Procurement*. London: Macmillan Press Limited.
- Tyler, T.R. (1988) Quality of Dispute Resolution Procedures and Outcomes: Measurement Problems and Possibilities, The. *Denv. UL Rev.*, **66**, p.419.
- UNCTAD (2008) *World Investment Report*, 2008 New York, Geneva: United Nations.
- UNCTAD (2010) *Investor–State Disputes: Prevention and Alternatives to Arbitration*. ISBN 978-92-1-112793-5. New York and Geneva: United Nations.
- Ury, W.L., Brett, J.M. and Goldberg, S.B. (1988) *Getting disputes resolved: Designing systems to cut the costs of conflict*. Jossey-Bass.
- USAID (2003) Automated Directive System (ADS) 305 - Country Contracting Handbook - Chapter 2: Procurement of Construction Services [online]USAID. [Accessed 24-11-2012]. Available at: <<http://transition.usaid.gov/policy/ads/300/305.pdf>, <http://transition.usaid.gov/policy/ads/300/305mab.pdf>>.
- Vorster, M. (1993) *Dispute prevention and resolution*. Construction Industry Institute.
- Watts, V.M. and Scrivener, J.C. (1993) Review of Australian building disputes settled by litigation. *Building Research & Information*, **21**(1), pp.59-63.
- Wellington, J. (2012) Searching for ‘doctorateness’. *Studies in Higher Education*, (ahead-of-print), pp.1-14.
- Wellington, J.J. (2010) *Making Supervision Work for You: A Student's Guide*. Sage.
- Whitfield, J. (1994) *Conflicts in construction: Avoiding, managing, resolving*. Macmillan.
- Whittemore, R., Chase, S.K. and Mandle, C.L. (2001) Validity in qualitative research. *Qualitative health research*, **11**(4), pp.522-537.
- World Bank (1994) *Infrastructure for development*. Oxford: Oxford University Press.
- World Bank (2003) *Country Procurement Assessment Report -Ghana, Vol1 of 5*. Washington DC: Ghana Country Department, The World Bank.
- World Bank (2003) *Country Procurement Assessment Report -Ghana, Vol 2 of 5*. Washington DC: Ghana Country Department, The World Bank.
- World Bank (2008) *Sustainable Infrastructure Action Plan FY 2009-2011* [online]. 1818 H Street NW Washington DC 20433: The International Bank for Reconstruction and Development /The World Bank Group [Accessed 17th July,2011].Available at: <<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSDNET/0,,contentMDK:22493665~menuPK:6395187~pagePK:64885161~piPK:64884432~theSitePK:5929282,00.html>>.
- World Bank (2011) *Country and Lending Groups* [online]. [Accessed 27/12/11]. Available at: <<http://data.worldbank.org/about/country-classifications/country-and-lending-groups>>.
- World Bank (2011) *Data-How we Classify Countries* [online]. [Accessed 27/12/11]. Available at: <<http://data.worldbank.org/about/country-classifications>>.
- World Bank (2011) *Global Economic Prospects - Navigating Strong Currents, Vol. 2*. Washington DC The International Bank for Reconstruction and Development / The World Bank.
- World Bank (2011) *Global Economic Prospects -Maintaining Progress amid Turmoil*. Washington DC The International Bank for Reconstruction and Development / The World Bank.

- World Bank (2011) *Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers*. 1818 H Street, N.W. Washington, D.C. 20433, U.S.A: The International Bank for Reconstruction and Development /The World Bank, p. 21.
- World Bank and PPIAF (2010) *Private Participation in Infrastructure Database*. World Bank/ PPIAF.
- Yates, J. and Duran, J. (2006) Utilizing dispute review boards in relational contracting: A case study. *Journal of Professional Issues in Engineering Education and Practice*, **132**(4), pp.334-341.
- Yelpaala, K. (2006) In Search of a Model Investment Law for Africa. *African Development Bank Law for Development Review*, **Vol. 1**, p.2.
- Yin, R.K. (2009) *Case study research: Design and methods*. Sage publications, Inc.
- Yusof, A.M., Ismail, S. and Chin, L.S. (2011) Procurement Method as Conflict and Dispute Reduction Mechanism for Construction Industry in Malaysia. *2nd International Conference on Construction and Project Management*. 2011 IACSIT Press, Singapore.

APPENDICES

Appendix A - Interview Guide

Interview Guide Resolution of Construction Disputes Arising From Major Infrastructure Projects in Developing Countries – A Case Study of Ghana

Brief Instructions to Interviewees:

This is a qualitative study. Participants' knowledge of the subject-matter of the research, views, experiences and opinions are central to the study. Therefore, participants are encouraged to answer the main and follow-up questions as exhaustively as they possibly can so that their rich experiences can be captured in this study. Anonymity and confidentiality of all responses is assured/ guaranteed.

Name of Interviewee :
Organisation :
Position :
No. of years employed :
Venue of Interview :
Date :

1. Preliminary Issues

1.1. The Organisation (Nature and objects)

1.2. Interviewee's role(s) in the organisation. Number of years the interviewee has been performing roles.

1.3. Organisation's involvement in the acquisition of major infrastructure projects in Ghana.

What role did/has it played? How long has it been playing this/these roles?

2. Procurement Process – Choosing Dispute mechanism(s)

2.1. The role of the interviewee's organisation in the procurement of major projects.

Procurement strategies often used for major projects acquisition in interviewee's organisation. Why the particular strategy or strategies? Who are involved in the making of procurement decisions? Are the organisation's decisions provisional or final? If provisional, who has the final say on issues such as procurement strategy and selection of consultants and contractors?

2.2. Standard form contracts most/regularly used. Whose decision? Why the particular standard form(s)?

2.3. Negotiation of terms in special conditions of contract. Whose duty? How is it conducted?

2.4. Typical dispute resolution mechanisms used- Arbitration/mediation/ dispute boards etc. why the choice? Why not others?

2.5. Negotiation on dispute resolution terms – How often? At what stage?

2.6. Factors considered in selecting dispute resolution mechanisms.

3. Disputes and the Resolution Process

3.1. Nature/ types of claims

3.2. Conditions which occasion/lead to disputes –

3.3. Procedure for dealing with disputes in interviewee's organisation. Any written policy or guide on dispute resolution?

3. 4. From interviewee's experience, what are the various stages that disputes will often go through before they are finally resolved?
- 3.5. Where parties decide to use international commercial arbitration (ICA) how is the period preceding ICA utilised to attempt a resolution? In the interviewee's opinion do parties utilise the period for amicable settlement effectively? If so how? If not, why?
- 3.6. To what extent do parties utilise non-binding alternative resolution mechanisms such as negotiation, mediation, dispute review boards etc? What challenges, if any, have you encountered in practice with the use of these mechanisms? From your experience, what are the barriers to the use of these methods in major project construction disputes?
- 3.7. What are the challenges associated with the current modes of construction dispute resolution – interviewee's experiences.
3. 8. In your opinion, what can be done to prevent/reduce the occurrence of construction disputes in major infrastructure projects in Ghana?

4. Interviewee's experience of how specific past construction disputes were resolved – the process

- 4.1. Nature of Project(s)
- 4.2. Description of Project(s) (Project objectives etc.)
- 4.3. Nature of the Parties involved (State entities, international companies etc.)
- 4.4. Other interested parties (Donors/ Lenders) and their roles, if any.

4.5. Interviewee's experience with the project – procurement strategies, contract negotiations, dispute resolution clauses (any negotiations?), why a particular arrangement was preferred to others, disputes, how they were resolved, stages etc.

4.6. Lessons and suggestions for an efficient dispute resolution process based on interviewee's previous encounters.

4.9. Is there anything else the interviewee thinks I should know to understand major project dispute resolution processes better?

4.10. Reference/ recommendations – to whom should I talk to find out more about resolution of disputes arising from major projects?

Concluding remarks: Thank you- confidentiality of responses - prospects of future interviews.

Appendix A1 - Updated Interview Guide after pilot

Interview Guide Resolution of Construction Disputes Arising From Major Infrastructure Projects in Developing Countries – A Case Study of Ghana

Brief Instructions to Interviewees:

This is a qualitative study. Thus, participants' knowledge of the subject-matter of the research, views, experiences and opinions are central to the study. Participants are therefore encouraged to answer the main and follow-up questions as exhaustively as they possibly can so that their rich experiences can be captured in this study. Anonymity and confidentiality of all responses is assured.

Name of Interviewee :
Organisation :
Position :
No. of years employed :
Venue of Interview :
Date :

1. Preliminary Issues

- 1.1. The Organisation (Nature and objects)
- 1.2. Interviewee's role(s) in the organisation. Number of years the interviewee has been performing roles.
- 1.3. Organisation's involvement in the acquisition of major infrastructure projects in Ghana. What role did/has it played? How long has it been playing this/these roles?

2. Procurement Process – Choosing Dispute mechanism(s)

- 2.1. The role of the interviewee's organisation in the procurement of major projects. Procurement strategies often used for major projects acquisition in interviewee's organisation. Why the particular strategy or strategies? Who are involved in the making of procurement decisions? Are the organisation's decisions provisional or final? If

provisional, who has the final say on issues such as procurement strategy and selection of consultants and contractors?

- 2.2. Standard form contracts most/regularly used. Whose decision? Why the particular standard form(s)?
- 2.3. Negotiation of terms in special conditions of contract. Whose duty? How is it conducted?
- 2.4. Typical dispute resolution mechanisms used- Arbitration/mediation/ dispute boards etc. why the choice? Why not others?
- 2.5. Negotiation on dispute resolution terms – How often? At what stage? What role(s) do your organisation play?
- 2.6. Factors considered in selecting dispute resolution mechanisms.

3. Disputes and the Resolution Process

- 3.1. Nature/ types of claims
- 3.2. Conditions which occasion/lead to disputes –
- 3.3. Procedure for dealing with disputes in interviewee's organisation. Any written policy or guide on dispute resolution?
- 3. 4. From interviewee's experience, what are the various stages that disputes will often go through before they are finally resolved? Please give details.
- 3.5. Where parties decide to use international commercial arbitration (ICA) how is the period preceding ICA utilised to attempt a resolution? In the interviewee's opinion do parties utilise the period for amicable settlement effectively? If so how? If not, why?
- 3.6. To what extent do parties utilise non-binding alternative resolution mechanisms such as negotiation, mediation, dispute review boards etc? What challenges, if any, has the interviewee encountered in practice with the use of these mechanisms? From his/her experience(s), what are the barriers to the use of these methods in major project construction disputes?

- 3.7. What are the challenges associated with the current modes of construction dispute resolution – interviewee’s experiences.
- 3. 8. In the interviewee’s opinion, what can be done to prevent/reduce the occurrence of construction disputes in major infrastructure projects in Ghana?
- 3.9. Lessons and suggestions for an efficient dispute resolution process based on interviewee’s previous encounters.
- 3.10. Is there anything else the interviewee thinks I should know to understand major project dispute resolution processes better?
- 3.11. Reference/ recommendations – to whom should I talk to find out more about resolution of disputes arising from major projects?

Concluding remarks: Thank you, confidentiality of responses, prospects of future interviews etc.

Appendix B - A sample Request Letter to Institutions affiliated with the Employer

.....

 Dear Mr.,

Application for Permission to Conduct Interviews

I am by this letter humbly requesting your institution to participate in a research I am conducting as part of the requirements for my doctorate degree in the School of Technology, University of Wolverhampton. The research is under the supervision of Professor Issaka Ndekugri, Professor of Construction and Engineering Law and Director of the Construction Law and Dispute Resolution Programme of the School. Below are details regarding the aim and objectives of the research, reasons for selecting your institution for study, what activities will occur on your site during the research, issues of confidentiality and anonymity and the likely benefits that your institution may gain from participating in this research.

The World Bank and the other Multilateral Development Banks (MDBs) have identified infrastructure development as a necessary component of any effective strategy for economic development in the developing world. Unfortunately, disputes often arise from major infrastructure projects in the developing world that are resolved at great cost by courts and arbitral tribunals constituted from the most expensive legal professionals in the developed world. Whilst similar projects in the developed world also suffer from the challenge of costly disputes, there is a growing trend of resolving them by less costly Alternative Dispute Resolution Methods (ADR) such as mediation, expert determination and dispute boards. Compounding the difficulties of developing countries is the general lack of empirical evidence regarding practical steps in the resolution of construction disputes arising from major projects in developing countries.

The aim of this research is to carry out a critical examination of the Ghanaian experience of the resolution of construction disputes from major infrastructure projects and thereby develop strategies for dispute reduction and cost- effective resolution. To achieve the aim of the research, the study will focus on the following objectives: (a) describe the state, trends and the context of major infrastructure development in Ghana; (b) examine the main parties involved in the major construction industry in Ghana; (c) investigate the framework for major infrastructure procurement and the impact of the process on dispute resolution; (d) examine the legal and institutional framework for resolving disputes from major projects including the processes and stages involved from the emergence of a dispute to the final determination of same; (e) study critically some international arbitration cases relating to major infrastructure projects in Ghana; and (f) identify the challenges to the extant modes of resolution, barriers to the determination of construction disputes by methods other than international commercial arbitration and litigation, and remedial strategies.

Your institution is one of the few in Ghana which are regularly involved in major infrastructure projects and the resolution of disputes arising therefrom. Your key personnel have experienced the emergence and the resolution of many disputes and are better placed to share such experiences as they relate to the outlined objectives of this research.

The study will entail the conduct of interviews with your personnel, who have been involved in project planning, procurement, contract negotiations and administration, project management and dispute resolution. Attached is an interview guide. Each interview is expected to take at least one hour at an agreed location. With your permission or that of the interviewees, the said interviews will be audio recorded and subsequently transcribed. This is to ensure that the interviewee's contributions are accurately captured. The interviewee's right to refuse to answer a question or participate in this research remains intact and shall be respected.

Any information provided during the interview or in documentary form shall remain confidential, anonymous and shall remain securely stored. Access to such data shall only be available to the supervisory team and me. Portions of the data collected (the source of which shall remain anonymous) may be quoted in the thesis, reports and journal publications emanating from this research. There are no known risks, current or anticipated, to your staff/personnel as participants in this research.

It is expected that the outcome of this study will not only benefit your institution but also the State by bringing into sharp focus the need for policy and guidelines on diversified dispute resolution strategies for effective and efficient reduction and resolution of construction disputes from major projects. For further information, please contact me at j.mante@wlv.ac.uk or mantecj@gmail.com. You can also reach my Supervisor, Prof. Ndekugri at the School of Technology, University of Wolverhampton, City Campus South, Wulfruna Street, Wolverhampton, WV1 1LY, United Kingdom, tel.: +44 (0) 1902 321000.

I await your response. Thank you in advance.

Yours Faithfully,

Appendix B1 - Request Letters addressed to Interviewees with Institutions affiliated to the Employer

.....

 Dear Mr.,

Application for Permission to Conduct Interviews

I am by this letter humbly requesting you to participate in a research I am conducting as part of the requirements for my doctorate degree in the School of Technology, University of Wolverhampton. The study is under the supervision of Professor Issaka Ndekugri, Professor of Construction and Engineering Law and Director of the Construction Law and Dispute Resolution Programme of the School. Below are details regarding the aim and objectives of the research, reasons for selecting you to be part of the study and your involvement, issues of confidentiality and anonymity and the likely benefits of the research.

The World Bank and the other Multilateral Development Banks (MDBs) have identified infrastructure development as a necessary component of any effective strategy for economic development in the developing world. Unfortunately, disputes often arise from major infrastructure projects in the developing world that are resolved at great cost by courts and arbitral tribunals constituted from the most expensive legal professionals in the developed world. Whilst similar projects in the developed world also suffer from the challenge of costly disputes, there is a growing trend of resolving them by less costly Alternative Dispute Resolution Methods (ADR) such as mediation, expert determination and dispute boards. Compounding the difficulties of developing countries is the general lack of empirical evidence regarding practical steps in the resolution of construction disputes arising from major projects in developing countries.

The aim of this research is to carry out a critical examination of the Ghanaian experience of the resolution of construction disputes from major infrastructure projects and thereby develop strategies for dispute reduction and cost- effective resolution. To achieve the aim of

the research, the study will focus on the following objectives: (a) describe the state, trends and the context of major infrastructure development in Ghana; (b) examine the main parties involved in the major construction industry in Ghana; (c) investigate the framework for major infrastructure procurement and the impact of the process on dispute resolution; (d) examine the legal and institutional framework for resolving disputes from major projects including the processes and stages involved from the emergence of a dispute to the final determination of same; (e) study critically some international arbitration cases relating to major infrastructure projects in Ghana; and (f) identify the challenges to the extant modes of resolution, barriers to the determination of construction disputes by methods other than international commercial arbitration and litigation, and remedial strategies.

You have been identified as one of the few in Ghana who have acquired much experience regarding acquisition of major infrastructure projects and the resolution of disputes arising therefrom over the years. Therefore, you are better placed to share such experiences as they relate to the outlined objectives of this research.

The study will entail the conduct of an interview with you at an agreed time and location. This is expected to take at least one hour. The interview will tap into your experiences, views and opinions about the resolution of construction disputes arising from major projects. Attached is an interview guide. With your permission, the said interview will be audio recorded and subsequently transcribed. This is to ensure that your contributions are accurately captured. Your right to refuse to answer a question or participate in this research remains intact and shall be respected.

Any information provided during the interview or in documentary form shall remain confidential, anonymous and shall remain securely stored. Access to such data shall only be available to the supervisory team and me. Portions of the data collected (the source of which shall remain anonymous) may be quoted in the thesis, reports and journal publications

emanating from this research. There are no known risks, current or anticipated, to you as participant in this research.

It is expected that the outcome of this study will not only benefit your institution but also the State as a whole by bringing into sharp focus the need for policy and guidelines on diversified dispute resolution strategies for effective and efficient reduction and resolution of construction disputes from major projects. For further information, please contact me at j.mante@wlv.ac.uk or mantecj@gmail.com. You can also reach my Supervisor, Prof. Ndekugri at the School of Technology, University of Wolverhampton, City Campus South, Wulfruna Street, Wolverhampton, WV1 1LY, United Kingdom, tel.: +44 (0) 1902 321000.

I await your response. Thank you in advance.

Yours Faithfully,

Appendix B2- A sample Request Letter to Foreign Contractors and adjunct organisations

.....

.....

.....

Dear Ms,

Application for Permission to Conduct Interviews

I am by this letter humbly requesting your company/institution to participate in a research. I am conducting as part of the requirements for my doctorate degree in the School of Technology, University of Wolverhampton. The study is under the supervision of Professor Issaka Ndekugri, Professor of Construction and Engineering Law and Director of the Construction Law and Dispute Resolution Programme of the School. Below are details regarding the aim and objectives of the research, reasons for selecting your company/institution for study, what activities will occur on your site during the research, issues of confidentiality and anonymity and the likely benefits that your company/institution may gain from participating in this research.

The World Bank and the other Multilateral Development Banks (MDBs) have identified infrastructure development as a necessary component of any effective strategy for economic development in the developing world. Unfortunately, disputes often arise from major infrastructure projects in the developing world that are resolved at great cost by courts and arbitral tribunals constituted from the most expensive legal professionals in the developed world. Whilst similar projects in the developed world also suffer from the challenge of costly disputes, there is a growing trend of resolving them by less costly Alternative Dispute Resolution Methods (ADR) such as mediation, expert determination and dispute boards. Compounding the difficulties of developing countries is the general lack of empirical evidence regarding practical steps in the resolution of construction disputes arising from major projects in developing countries.

The aim of this research is to carry out a critical examination of the Ghanaian experience of the resolution of construction disputes from major infrastructure projects and thereby develop strategies for dispute reduction and cost- effective resolution. To achieve the aim of the research, the study will focus on the following objectives: (a) describe the state, trends and the context of major infrastructure development in Ghana; (b) examine the main parties involved in the major construction industry in Ghana; (c) investigate the framework for major infrastructure procurement and the impact of the process on dispute resolution; (d) examine the legal and institutional framework for resolving disputes from major projects including the processes and stages involved from the emergence of a dispute to the final determination of same; (e) study critically some international arbitration cases relating to major infrastructure projects in Ghana; and (f) identify the challenges to the extant modes of resolution, barriers to the determination of construction disputes by methods other than international commercial arbitration and litigation, and remedial strategies.

Your company/institution is one of the few in Ghana which are regularly involved in the execution of major infrastructure projects and the resolution of disputes arising therefrom. Your key personnel have experienced the emergence and the resolution of many disputes and are better placed to share such experiences as they relate to the outlined objectives of this research.

The study will entail the conduct of interviews with your personnel, who have been involved in project planning, procurement, contract negotiations and administration, project management and dispute resolution. Attached is an interview guide. Each interview is expected to take at least one hour at an agreed location. With your permission or that of the interviewees, the said interviews will be audio recorded and subsequently transcribed. This is to ensure that the interviewee's contributions are accurately captured. The interviewee's right

to refuse to answer a question or participate in this research remains intact and shall be respected.

Any information provided during the interview or in documentary form shall remain confidential, anonymous and shall remain securely stored. Access to such data shall only be available to the supervisory team and me. Portions of the data collected (the source of which shall remain anonymous) may be quoted in the thesis, reports and journal publications emanating from this research. There are no known risks, current or anticipated, to your staff/personnel as participants in this research.

It is expected that the outcome of this study will not only benefit your company/institution but also the State by bringing into sharp focus the need for policy and guidelines on diversified dispute resolution strategies for effective and efficient reduction and resolution of construction disputes from major projects. For further information, please contact me at j.mante@wlv.ac.uk or mantecj@gmail.com. You can also reach my Supervisor, Prof. Ndekugri at the School of Technology, University of Wolverhampton, City Campus South, Wulfruna Street, Wolverhampton, WV1 1LY, United Kingdom, tel.: +44 (0) 1902 321000.

I await your response. Thank you in advance.

Yours Faithfully,

**APPENDIX B2 -Request Letters addressed to Interviewees with Institutions affiliated
to the Contractors and adjunct organisations**

.....

Dear Ms.,

Application for Permission to Conduct Interviews

I am by this letter humbly requesting you to participate in a research I am conducting as part of the requirements for my doctorate degree in the School of Technology, University of Wolverhampton. The study is under the supervision of Professor Issaka Ndekugri, Professor of Construction and Engineering Law and Director of the Construction Law and Dispute Resolution Programme of the School. Below are details of the aim and objectives of the research, reason(s) for selecting you to be part of the study and your involvement, issues of confidentiality and anonymity and the likely benefits of the research.

The World Bank and the other Multilateral Development Banks (MDBs) have identified infrastructure development as a necessary component of any effective strategy for economic development in the developing world. Unfortunately, disputes often arise from major infrastructure projects in the developing world that are resolved at great cost by courts and arbitral tribunals constituted from the most expensive legal professionals in the developed world. Whilst similar projects in the developed world also suffer from the challenge of costly disputes, there is a growing trend of resolving them by less costly Alternative Dispute Resolution Methods (ADR) such as mediation, expert determination and dispute boards. Compounding the difficulties of developing countries is the general lack of empirical evidence regarding practical steps in the resolution of construction disputes arising from major projects in developing countries.

The aim of this research is to carry out a critical examination of the Ghanaian experience of the resolution of construction disputes from major infrastructure projects and thereby

develop strategies for dispute reduction and cost- effective resolution. To achieve the aim of the research, the study will focus on the following objectives: (a) describe the state, trends and the context of major infrastructure development in Ghana; (b) examine the main parties involved in the major construction industry in Ghana; (c) investigate the framework for major infrastructure procurement and the impact of the process on dispute resolution; (d) examine the legal and institutional framework for resolving disputes from major projects including the processes and stages involved from the emergence of a dispute to the final determination of same; (e) study critically some international arbitration cases relating to major infrastructure projects in Ghana; and (f) identify the challenges to the extant modes of resolution, barriers to the determination of construction disputes by methods other than international commercial arbitration and litigation, and remedial strategies.

You have been identified as one of the few in Ghana who have acquired much experience regarding execution of major infrastructure projects and the resolution of disputes arising therefrom over the years. Therefore, you are better placed to share such experiences as they relate to the outlined objectives of this research.

The study will entail the conduct of an interview with you at an agreed time and location. This is expected to take at least one hour. The interview will tap into your experiences, views and opinions about the resolution of construction disputes arising from major projects. Attached is an interview guide. With your permission, the said interview will be audio recorded and subsequently transcribed. This is to ensure that your contributions are accurately captured. Your right to refuse to answer a question or participate in this research remains intact and shall be respected.

Any information provided during the interview or in documentary form shall remain confidential, anonymous and shall remain securely stored. Access to such data shall only be available to the supervisory team and me. Portions of the data collected (the source of which

shall remain anonymous) may be quoted in the thesis, reports and journal publications emanating from this research. There are no known risks, current or anticipated, to you as participant in this research.

It is expected that the outcome of this study will not only benefit your company but also the State as a whole by bringing into sharp focus the need for policy and guidelines on diversified dispute resolution strategies for effective and efficient reduction and resolution of construction disputes from major projects. For further information, please contact me at j.mante@wlv.ac.uk or mantecj@gmail.com. You can also reach my Supervisor, Prof. Ndekugri at the School of Technology, University of Wolverhampton, City Campus South, Wulfruna Street, Wolverhampton, WV1 1LY, United Kingdom, tel.: +44 (0) 1902 321000.

I await your response. Thank you in advance.

Yours Faithfully,

Appendix C –List of Codes

14-Dec-13 11:43 AM

Name of Codes	
1	A turn around experience
2	Abstract Concepts on DR-sense making
3	Acceleration
4	Actions and interactions (connecting rationale)
5	Actions-Interactions
6	Added cost
7	Additional payments for no added benefit
8	Adjudication
9	Adjudication-contractual for minor or local projects
10	Adjudication-procedure
11	Administering Major Projects
12	Adversarial culture
13	A-Gs dispute handling roles
14	A-Gs role in Procurement
15	AGs' triple role of advising, reviewing and approving contracts
16	AGs-Procedure for handling disputes
17	Amicable settlement
18	Approach of Foreign Contractors
19	Approach to dispute differ depending on the origin of contractor
20	Approval of contract documentation
21	Arbitration
22	Arbitration and litigation compared
23	Arbitration and mediation compared
24	Arbitration- challenges
25	Arbitration compared
26	Arbitration -not helpful to client all these years
27	Arbitration Preferred by Client
28	Arbitration preferred in construction- rationale
29	Arbitration- terrible
30	Arbitration too expensive
31	Arm twisting
32	Assessing Int. Arbitration
33	Attitudes of Foreign Contractors
34	Attitudes to Dispute Resolution
35	Authoritarianism
36	Avoid formal dispute resolution processes
37	Bad international publicity for Client

38	Balkan Energy
39	Barriers to the use of intermediary DR mechanisms
40	Barriers to using ADRMs
41	Being claim-conscious
42	Being selective and avoiding dispute prone contracts
43	Being tardy with responses to ICA notices
44	Benefitting Project Executors not Client
45	Binding outcome
46	Blacklist -victimization
47	Blacklisting
48	Breach of Contract
49	Brinkmanship
50	Budgetary allocation for MDAs infrastructure programmes
51	Budgeting
52	Burnt fingers
53	Business-minded
54	Buy-out
55	Cabinet directive on contract review by A-Gs
56	Cabinet's role in Procurement
57	Calling of bluffs
58	Capacity building
59	Cape Coast to Takoradi road
60	Carrot and Stick
61	Causes of Disputes
62	Challenges with Sole sourcing
63	Change of scope of work
64	Changes to the general conditions
65	Claim conditions & Causes of Disputes
66	Claims
67	Claims minimization policy
68	Claims not covered by external funds
69	Claims unhindered
70	Client
71	Client Interference
72	Client producing first draft of contract
73	Client's Approach to Process
74	Client's Attitude
75	Clients blatant disregard of Contractor's claim
76	Client's delay in making a decision over a long period
77	Client's failure or inability to make a decision
78	Client's failure to give the Contractor feedback on claim within a reasonable time

79	Client's indecision on a claim
80	Clients or Owners
81	Client's views on attitudes of foreign contractors to dispute resolution
82	Collaborative method - PPP
83	Comfort of Contractors
84	Communicating Project finance to Cabinet
85	Compensation payments issues
86	Complete lack of interest by Contractors both foreign and Local
87	Components of the Construction Contract
88	Conceptual Hooks
89	Conciliation
90	Condition for amicable settlement- cost -benefit
91	Conditions for privately sourced funding
92	Conditions of contract - selection and use
93	Conducting lender due diligence
94	Conducting VfM Audits
95	Confidence in the infrastructure for settlement
96	Confidence in the mechanism
97	Confidentiality
98	Connection between contract interpretation and DR
99	Conscious of possibility of disputes
100	Consequence of current contract review process
101	Consequence of lack of PAB or multi-sectorial Committee
102	Consequences of barriers
103	Consequences of breach of contract
104	Consequences of disputes
105	Consequences of Extant dispute Resolution Process
105	Consequences of external funding
106	Consequences of poor dispute resolution practices
107	Considering dispute clauses in VfM audit
108	Constitutional Lacunae in contract review system in Ghana
109	Construction
110	Consultants
111	Consulting for major infrastructure acquisition
112	Contract administration challenges
113	Contract Formation
114	Contract Preparation
115	Contract review
116	Contract review - factors considered
117	Contract review - litigation in foreign forum abhorred
118	Contract review by A-G - background
119	Contract review entailing drafting and redrafting of COPA

120	Contract type - selection and use
121	Contractor Attitude
122	Contractor drafts accepted due to lack of expertise
123	Contractor v. Contractor DR
124	Contractor-related inhibitors
125	Contractor Preferences
126	Contractors producing first draft of contracts
127	contractual game
128	Cooperation
129	COPA Ghana -terms
130	Cost
131	Cost of amicable settlement
132	Cost of Arb incentive for DRM practice in Ghana
133	Cost v. nature of transaction
134	Cost-benefit analysis v. Public accountability
135	Court referred arbitration
136	Creating a contract review infrastructure
137	Cultural limitations
138	Culture
139	Culture of losing arbitrations
140	Cutting losses on DR
141	DAB
142	Data Protection
143	Database of foreign contractors
144	Debt Management Division
145	Debt sustainability Analysis
146	Deceleration
147	Default Strategy
148	Deficiencies with the current procurement
149	Definition of claims.
150	Delayed Payment
151	Delays
152	Delegating power to take legal decisions
153	demand their pound of flesh
154	Describing major road networks in Ghana
155	Design
156	Design and Build
157	Design Changes
158	Designers
159	Destroying relationships
160	Developing local expertise in Arbitration
170	Developing local expertise in Arbitration (2)
171	Developing strong relationship with contractors
172	Differences
173	Disagreement

174	Dispute after engineer's decision is rejected
175	Dispute avoidance & reduction
176	Dispute Avoidance strategy - using PAB
177	Dispute Frequency
178	Dispute handling- organisational structure - A-Gs
179	Dispute Handling roles
180	Dispute Query
181	Dispute resolution
182	Dispute resolution infrastructure
183	Dispute Resolution Process -Parties' response to disputes
184	Dispute Resolution Process -Parties' response to disputes (lead to) Consequences of barriers
185	Disputes
186	Disputes - Paying attention to disputes
187	Disputes are pursued only when contractors are exiting the system
188	Disregard of or lack of attention for the contractual provisions and their implementation
189	Distinguishing between externally funded projects and ordinary construction project
190	Doing due diligence on foreign contractors
191	doing due diligence on foreign contractors
192	Donor choice
193	Donor Partner funding
194	Donor-driven strategies
195	Drafting & Negotiating COPA -MDAs - Weak capacity
196	DRB
198	DRM Practice - Weighing your options
199	DRMs
200	DRMs regularly used
201	DRMs not in agreement but in use
202	DRMs rarely used
203	Dropping - suspending pursuit of disputes
204	Dropping - suspending the claims
205	Due diligence & culture familiarity
206	Due diligence on personnel involved
207	Education
208	Effect of traditional procurement method
209	Effective contract preparation
210	Effectiveness
211	Efficient and cost effective Resolution- Opinions on how and what
212	Eliminating Litigants through Procurement process
213	Employer-related inhibitors

214	Employer's views on ICA
215	Energy Infrastructure
216	Enforceability
217	Enforcement of contract provisions
218	Engaging with Experts on the subject matter
219	Engineer or Consultant's role
220	Engineer's Determination
221	Entrenched positions
222	Environment favour settlement
223	EPC
224	Equating their job with their life - Implying Seriousness
225	EU Practices on Projects
226	Executing Major Projects
227	Executors
228	Exhausting all resolution possibilities
229	Exigencies -driven strategies
230	Expert Determination
231	Exploiting contractual leeway
232	Exploiting weakness in traditional procurement methods
233	Extension of time
234	External Influence on major projects delivery
235	Extra expense
236	Extra work
237	Face to Face meeting after notice is served
238	Factors influencing DRM selection
239	Failure of Parliamentary scrutiny of contracts
240	Failure to correspond with Contractor
241	Failure to patronize local DR institutions
240	Fairly Balanced provisions
241	Fairness
242	Familiarity of Process to Contractors
243	Favoring Litigation-rationale
244	Fear of being blacklisted or blackmailed
245	Fear of being branded a Litigant
246	Fear of Failure to meet expectations
247	Fear of loss of future jobs
248	Fear of trying something new
249	Features and Context of Parties to Dispute Resolution
250	Features and Context of Parties to Dispute Resolution (affect) Dispute avoidance & reduction

251	Features and Context of Parties to Dispute Resolution (determine) Dispute Resolution Process -Parties' response to disputes
252	Features and Context of Parties to Dispute Resolution (have influence on) Dispute Resolution Process -Parties' response to
253	Feet-dragging
254	Few disputes
255	Finance Committee
256	Financial conditions
257	Financial obligations
258	Financing infrastructure Acquisition
259	Firefighting
260	Fiscal policy
261	'Forced settlements'
262	Foreign Executors
263	Form of Contract
264	Formalizing the use of multi-sectoral committees through policy
265	Front End ordering
266	Funders - Influencing the procurement process
267	Funders assisting in training local expertise
268	Funder's choice
269	Funders' choice of conditions of contract
270	Funder's involvement in dispute resolution
271	Funders position on payment of avoidable claims
272	Funders with conditions- lots in the system
273	Funding Major Projects
274	Funding requirement
275	Funding sources for infrastructure development
276	Funding sources for infrastructure development (affect) Procurement methods
277	Funding sources for infrastructure development (determine) Procurement Strategies
278	Further research -what is the cost of disputes & Resolution
279	Game playing
280	Generic Inhibitors
281	Ground conditions
282	Growing more on paper than in reality
283	Guarding against impleading the State before a foreign court
284	Employer hardly pays attention to DR clauses
285	Harmonising fiscal and monetary policy
286	Having political influence and connections
287	Ignoring correspondence from Executors
288	Ignoring Notices of Arbitration

289	Ills of GOG funding
291	Immunity clauses
292	Impact of delay payments
293	Impeccable record-keeping – Foreign Contractors
294	Implementing contract review outcomes
295	Improved contract administration providing early warning signals
296	In charge of economic policies
297	Inadequate engineering studies on Projects
298	Inadequate infrastructure for contract review
299	Incidence of urgency contracts
300	Inclement weather
301	Incomplete Design issues
302	Inconsiderate of client's position
304	Increased use of DRMs
305	Enculturation
306	Independent Experts
307	Indexicality
308	Inefficient inter-organisational cooperation
309	Inevitability
310	Influence of Culture on Construction Dispute resolution
311	Informal resolution mechanisms
312	The information game
313	Infrastructure Database
314	Institutional cooperation on dispute resolution
315	Institutional Involvement in major infrastructure projects - AGs
316	Institutional involvement in resolving 'problems' on projects
317	Institutional roles in dispute resolution
318	Institutional roles in major Projects procurement
319	Institutional structures
320	Institutional structures (Reflect) Client's Attitude
321	Insufficient advice on ADRM choices
322	Integrated methods -procurement
323	Interest claims will compensate
324	Internal turf wars
325	International Arbitration
326	International Arbitration receiving more attention-rationale
327	International best practice
328	International ownership
329	Interviewee's Profile
330	Interviewee's role
331	Initiating Major Projects
332	Introducing a new contract provision as a result of an experience had
333	Investment Protection
334	Involving management

335	Involving management in resolution
336	jacks of all trades
337	Joint- funding
338	Justifying selection of Arbitration
339	Justifying the need for COPA Negotiation
340	Keeping up-to-date record of claims
341	Knowledge Gap of dispute professionals
342	Lack of alternative dispute resolution infrastructure
343	Lack of attention for dispute resolution at the front end by Client
344	Lack of attention to dispute resolution at the front end by Client
345	Lack of capacity
346	Lack of coordination
347	Lack of expertise- Arbitrators, Mediators
348	Lack of exposure for handlers
349	Lack of Good will
350	Lack of information on use and success rate
351	Lack of Innovation in Procurement
352	Lack of institutional cooperation
353	Lack of knowledge
354	Lack of expertise
355	Lack of Popularity -ADR
356	Lack of Specialisation hampering dispute handling
357	Lack of stance on alternatives to ICA -Employer
358	Lack of training
359	Lack of understanding
360	Lacking control over choice of mechanism
361	Lacking focus on disputes
362	Largest Employer
363	Laxity in contract administration
364	Learning from claim and dispute experiences
365	Learning from past experience
366	Learning from past experiences
367	Legal implications of Obligations
368	Legal system
369	Likely to dispute with Government
370	Link between political influence and DR practice
371	Link between poor contract preparation and review and claims and disputes
372	Link between poor planning and disputes
373	Linking claim conditions to political pressure
374	Linking claim reduction to pre-contractual activities
375	Linking contract to DR practice
376	Linking funding agency rules and requirements to ADRM choice

377	Linking government policy to DR choices
378	Linking individual interests and choices to DR Practices
379	Linking institutions to dispute resolution
380	Linking Parties, DR and Blacklist
381	Linking Political influences to disputes
382	Linking pre-contractual negotiations & contract administration lapses to claim and dispute reduction
383	Linking procurement to Dispute Resolution
384	Linking the various claim conditions to each other, delay, costs and claim
385	Litigating in the local court
386	Litigation favoured by some businesses
387	Litigation not a choice
388	Local contractors' attitude towards dispute
389	Looking out for all the elements of a valid contract
390	Maintaining Business relationships
391	Maintaining relationship as a basis for dropping claims
392	Making a Case for a firm stance on dispute resolution choices
393	Making Procurement decisions
394	Malfunctioning joint ventures - contractors
395	Water Expansion Project
396	Material failure during warranty period
397	MDAs role in dispute handling
398	Meaning of 'dispute'
399	Mediating Major Project dispute - an example
400	Mediation
401	Merging general and special conditions for medium to small works PPA docs
402	MOFEP - Pay dispute related cost and expenses
403	MOFEP's Conditions for funding Projects
404	MOFEP's requirements for non-GOG funding
405	MOFEP's role
406	Multi sectoral approach to dispute resolution - downside
407	Multi sectoral approach to dispute resolution- advantages
408	Multiple-mechanisms found in boiler plate contracts often unchanged
409	Multi-sectoral Approach to dispute resolution preferred
410	Multi-sectoral Committee to report to MDA
411	Nature of construction disputes
412	Nature of Parties
413	Negative Perceptions about ICA
414	Negative perceptions of ADR -non-binding, waste of time
415	Negotiating COPA

416	Negotiating COPA -Contractors' experience v. MDAs' experience
417	Negotiating COPA- extent of A-G's involvement
418	Negotiating COPA- the VRA Approach - the committee strategy
419	Negotiating dispute resolution clauses
420	Negotiating stepped delivery of possession of site
421	Negotiating with the Lender
422	Negotiation
423	Neutrality
424	No claim pursuit
425	No deliberate consideration of factors influencing DRM Selection
426	No disputes scenario
427	No infrastructure for major dispute resolution
428	No interest pursuit
429	Non performance
430	Non-Payment
431	Non-performance, breach of contract linked to Political interference
432	Not thinking dispute – Employer
433	Notice of arbitration issued
434	Objects of the Interviewee's organisation
435	One-sided consideration
436	Open support by the judiciary of DRM decisions
437	Open Tendering
438	Operationalizing Knowledge
439	Opting for Arbitration as first resort
440	Organisational structure
441	Other background information
442	Out to make money –Foreign contractor
443	PAB-paying attention to dispute resolution clauses
444	Paternalism
445	Partial possession of site
446	Parties' preferences
447	Parties to major construction projects
448	Party attitudes
449	Pay attention to pre-contractual negotiations
450	Pay dispute related cost and expenses
451	Paying attention to dispute resolution at the front end by Client
452	Pending issues between Client and Contractor
453	Perception of bias against Developing countries
453	Playing an advisory role on major Project acquisitions - A-G
454	Playing hardball

455	Playing the past benefit card
456	Playing Victims
457	Playing victims in international arbitrations
458	Policy and guidelines on dispute resolution
459	Policy and or guidelines on dispute resolution
460	Policy and or guidelines on dispute resolution -Making a case for it
461	Policy on contract review, negotiation and approval
462	Policy on dispute handling and resolution at the AGs
463	Policy on dispute resolution advocated
464	Political Interference
465	Political Pressure
466	Politically tainted settlements
467	Poor at record keeping
468	Poor definition of the scope.
469	poor preparation of contracts
470	Poor project preparation linked to cost
471	Poor record keeping
472	Popularizing the other ADR
473	Post notice of claim
474	Post notice of claim - DUR
475	Power play
476	Power to make final decisions on resolution proposals
477	PPP - rationale
478	PPP as a strategy
479	Pre-contractual fixation on ICA by client
480	Pre-Contractual Negotiations
481	Prefer to go to international arbitration
482	Preference for a Sole Arbitrator
483	Pricing
484	Priority Projects
485	Privately solicited external funding
486	Procedure –Dispute resolution
487	Procedure for external funding
488	Procedure for GOG funding
489	Procedure for Sole sourcing
490	Process aim at embarrassing Client -ICA
491	Procurement
492	Procurement approvals required
493	Procurement by MOU
494	Procurement by MOU distinguished from Sole sourcing
495	Procurement history

496	Procurement methods
497	Procurement Procedure
498	Procurement Strategies
499	Producing standard ADR Clauses for contracts
500	Profit making
501	Profitable environment
502	Profit-oriented
503	Projects - Examples
504	Project Executors
505	Project objectives
506	Project preparation
507	Promotion of DRMs
508	Public Agreement Board -opposition to it by MDAs
509	Public Agreements Board
510	Public Agreements Board- recent efforts to revive it
511	Public suspicions
512	Quick resolution of an emerging dispute
513	Quick to accede to funding conditions
514	Rationale for a Contract review Infrastructure
515	Rationale for a multi-sectoral Committee
516	Rationale for contractor attitudes towards claims
517	Rationale for external funding
518	rationale for failure
519	Rationale for Contract review
520	Rationale for the no dispute claim - Intimidation
521	Rationale for VfM audit
522	Readiness to explore Client's record-keeping challenges
523	Recommendations
524	Recommended Approach to contract review
525	Refusal to accept defeat
526	Regular Project Meetings
527	Relocation of utilities
528	Remedial Strategies
529	Required policy changes
530	Resolving during Preliminary discussions
531	resolving problems- the impact of good working relationship
532	Resort to arbitration as threats
533	Responsible for government's contractual payments
534	Resulting action~ interaction
535	Resulting actions
536	Resulting actions and interactions
537	Resulting actions and reactions

538	Resulting Actions, reactions and no actions
539	Reticence- taciturn towards disputes
540	Review financial contracts for Infrastructure acquisition
541	Road sector -Technical Preparations
542	Rushing projects
543	Sanctioning lax officials
544	Scope of works or assignment
545	Scrutiny of contract provisions on issues such as dispute resolution
546	Sector ministry making a formal request for A-Gs no objection
547	Seeing Client as a Partner
548	Seeking Anonymity
549	Seeking approval for tax and duty waivers
550	Seeking funding - procedure
551	Seeking legal advice early
552	Seeking Parliamentary approval of project finance
553	Selection and use of ICA
554	Selective tendering
555	Setting Standards for DRM use
556	Settling Claims - The Engineer's role
557	Settling Claims within the Contract
558	Shoddy work - cutting corners
559	Shying away from formal DR processes
560	Site Meetings
561	Site Possession~ Access to Site
562	Irregular training
563	Sole Sourcing major projects
564	Sorting out compensation issues ahead of projects
565	standard and acceptable tried and tested
566	Standards for project set by implementing agency
567	State of cases at the point of reaching the A-Gs
568	State of Infrastructure
569	State playing a reactive role in choice of mechanisms
570	Sticking to old mindset
571	Strategic positioning
572	Strong reservation –dispute clauses
573	Submitting contract documents for review
574	Suppliers Credit
575	Tactical neglect
576	Taking responsibility for ADR use or settlements
577	Team Work
578	Teamwork as a driver for the contract review process

579	Tendering and Consultant & Contractor Selection Methods
580	Term sheet
581	Termination Clauses
582	The Artesian Well Scenario - Likely future impact
583	the Chinese approach to DR - promoting settlement and maintaining relationships
584	The Enforceability issue
585	The master-servant relationship
586	Think through DR clauses before Agreeing to use them
587	Threat of blacklist
588	Thresholding impractical
589	Traditional Methods
590	Training for lawyers
591	Training for the Government's personnel
592	Training required
593	Transactions are naturally very relational
594	Transfer of expertise
595	Treading on dangerous grounds.
596	Trust deficit for ADRs
597	Uncertain contractual provisions
598	Understanding Contracts before signing them
599	Unsolicited Proposals
600	Using ext. of time -non-monetary claim strategy
601	Using foreign lawyers, a matter of course
602	Using local expertise
603	Using the FIDIC DR provisions
604	Using threat of DR to achieve compliance
605	Value for money
606	Value of Project
607	VfM audit -procurement
608	Waiving condition Precedents
609	Wasting money and time –Dispute resolution
610	Water Infrastructure
611	Waterville v. GOG Mediation - Accra & Kumasi Sports Stadia Rehab
612	Weighing the factors -Cost v. Confidence in mechanism and process
613	Well researched forms
614	Western approach to DR- claim oriented
615	When a claim is rejected by the engineer
616	When the case is Spoilt or too late
617	Why DABs not set up

618	Why FIDIC
619	Why negotiations
620	Willing to settle
621	Works

Appendix D – Themes, Categories, Sub-categories and Codes

Themes	Categories/Sub-categories	Codes
Features and Context of Parties to Dispute Resolution	Institutional Structures	Objects of Interviewee's organisation
		Organisational Structure
		Interviewee's Profile
		Interviewee's Role
		Institutional roles in dispute resolution
		Institutional roles in major infrastructure procurement
	<i>Institutional roles in major infrastructure procurement</i>	Cabinet's role in Procurement
		MDAs roles
		A-Gs' role in Procurement
		MOFEP's role
		Multi-sectorial review Committee
	<i>MOFEP's role</i>	Responsible for economic policy formulation
		Communicate financial details of Projects to Cabinet
		Seeks parliamentary approval for loans and other financial arrangements
		Seeks parliamentary approval for tax and duty waivers
		Conduct value for money audit
		Conduct due diligence on lenders
		Negotiate with Lenders
		Conduct debt sustainability

Themes	Categories/Sub-categories	Codes
		analysis
		Review financial contracts
		Arranging for Finance for infrastructure projects
		Responsible for Government's contractual payment
		Harmonising fiscal and monetary policies of Government
		Budgeting
	<i>A-Gs' role in Procurement</i>	Advise, review and approve major infrastructure transactions
		Jacks of all trades
	<i>Institutional roles in dispute resolution</i>	A-G's role
		Fire Fighting
		MDA's role in dispute handling
		MOFEP's role –paying Government's dispute related cost and expenses
	<i>Consequences of Institutional structure and roles</i>	Inefficient inter-organisational cooperation
		Internal turf wars
		Lack of specialisation hampering dispute handling
	Funding Major projects	Rationale for external funding
		Conditions for privately sourced funds
		Externally funded projects v. ordinary self- funded projects

Themes	Categories/Sub-categories	Codes
		Procedure for external funding
		MOFEP's requirements for non-GoG funding
		Procedure for GoG funding
		MOFEP's role
		Consequences of external funding
		Ills of GoG funding
		Claims not covered by external funds
	<i>Funding sources for infrastructure development</i>	GoG
		Donor funding
		Private external funding
		Joint funding
	<i>External Influence on major projects delivery</i>	EU Practices on Projects
		Funders-influencing the procurement process
		Funders assisting in training local expertise
		Funders' choice of conditions of contract
		Funder's involvement in dispute resolution
		Funders position on payment of avoidable claims
		Funders with conditions
	Political Interference	Political pressure
		Political interference
		Consequences

Themes	Categories/Sub-categories	Codes
	Procurement	(see theme on procurement)
	Parties to major projects	Employer
		Foreign contractors
	Legal System	
	Influence of Culture on Construction dispute resolution	Environment favours settlement
		Authoritarianism
		Reticence- taciturn towards disputes
		Transactions are naturally very relational
		Attitudes to Dispute resolution
	<i>Employer's Attitudes to Dispute Resolution</i>	Blacklisting
		Buy out
		Forced settlement
		Involving management
		Politically tainted settlement
		Resolving at Preliminary discussions
		Litigating in local court
		Ignoring notices of Arbitration
		Being tardy with responses to ICA processes
		Ignoring correspondence on disputes from contractors
		Willing to settle
	<i>Client's views on attitudes of foreign contractors to dispute</i>	Being claim conscious
		Impeccable record keeping

Themes	Categories/Sub-categories	Codes
	<i>resolution</i>	Conscious of possibility of future disputes
		Readiness to explore client's record-keeping challenges
		Profit-oriented
		Business-minded
		Having political influence and connections
		Exploiting weaknesses of the traditional procurement method
		Avoid formal dispute resolution processes
		Use threat of DR(ICA) to achieve compliance
		Exploiting contractual leeway
		Prefer to ICA
	<i>Foreign contractors' attitude to dispute resolution</i>	Maintaining good relationship with the Employer
		Avoid dispute prone contracts
		See client as a partner
		Enculturation
	<i>Rationale for contractor attitudes towards disputes</i>	Profit
		Fear of loss of future jobs
		Interest claims will compensate
		Disputes pursued as part of exit plan
	Barriers to the use of	

Themes	Categories/Sub-categories	Codes
	intermediary DR mechanisms	
	<i>Employer-related barriers</i>	Largest Employer
		Blacklist-victimization
		Sticking to old minds
		Lack of stance on alternatives to ICA
		Lack of institutional cooperation
		Taking of responsibility for ADR use or settlement
		Fear of failure to meet expectations
		Poor record keeping
		Public suspicion
		Lack of Specialisation
		Lack of Policy and guidelines on dispute resolution
	<i>Contractor-related barriers</i>	Failure to pursue disputes for fear of being branded litigant
		The enforceability issue
	<i>Generic barriers</i>	Knowledge Gap of dispute professionals
		Lack of popularity
		Lack of information on use and success rate
		Cultural limitations
		Profitable environment
		The extra expense argument

Themes	Categories/Sub-categories	Codes
		Lack of expertise
		Negative perception of the use of ADR
		Adversarial culture
		Lack of alternative dispute resolution infrastructure
		Refusal to accept defeat
		Trust deficit
		Skewed training
Procurement	Contract Formation& Review <i>Contract Formation</i>	Contract preparation
		Client producing first draft of contract
		Contractor drafts accepted due to lack of expertise
		Contractors producing first draft of contracts
		Doing due diligence on foreign contractors
		Pre-Contractual Negotiations
		Pre-Contractual Negotiations- Approach of Foreign Contractors
		Lack of attention to dispute resolution at the front end by Client
		Negotiating COPA
		COPA Ghana –terms
		Drafting & Negotiating COPA -MDAs - Weak capacity
		Justifying the need for COPA

Themes	Categories/Sub-categories	Codes
		Negotiating COPA - Contractor's' experience v. MDAs' experience
		Negotiating COPA- extent of A-G's involvement
		Negotiating COPA- the VRA Approach - the committee strategy
		Negotiating dispute resolution clauses
		State playing reactive role in selection of dispute resolution mechanisms
		Components of the Construction Contract
		Conditions of contract - selection and use
		Conditions of contract - selection and use\Why FIDIC
		FIDIC- Fairly Balanced provisions
		Conditions of contract - selection and use\Why FIDIC\Familiarity
		Conditions of contract - selection and use\Why FIDIC\Funder's choice
		Conditions of contract - selection and use\Why FIDIC\International ownership
		Conditions of contract - selection and use\Why FIDIC\standard and acceptable tried and tested
		Conditions of contract -

Themes	Categories/Sub-categories	Codes
		selection and use\Why FIDIC\Well researched forms
		Contract type - selection and use
		Incidence of urgency contracts
		Merging general and special conditions for medium to small works PPA docs
		Suppliers Credit
		Linking claim reduction to pre-contractual activities
	<i>Contract Review</i>	Cabinet directive on contract review by A-Gs- recent development
		Consequence of lack of PAB or multi-sectorial Committee
		Constitutional Lacunae in contract review system in Ghana
		Contract review by A-G – background
		Drafting & Negotiating COPA -MDAs - Weak capacity
		Failure of Parliamentary scrutiny of contracts
		PAB-paid attention to dispute resolution clauses
		Public Agreement Board - opposition to it by MDAs
		Public Agreements Board- recent efforts to revive it
		Rationale for Contract Review
		Consequence of current

Themes	Categories/Sub-categories	Codes
		contract review process
		Inadequate infrastructure for contract review
		Link between poor contract preparation and review and claims and disputes
		Creating a contract review infrastructure
		Rationale for Contract review Infrastructure
		Rationale for a multi-sectoral Committee
		Approach to contract review
		Teamwork as a driver for the contract review process
		Approval of contract documentation
		Litigation in foreign forum abhorred
		Entailing drafting and redrafting of COPA
		Due diligence on personnel involved
		Engaging with Experts on the subject matter
		Financial obligations
		Form of Contract
		Guarding against impleading the State before a foreign court
		Immunity clauses
		Implementation

Themes	Categories/Sub-categories	Codes
		Legal implications of obligations
		Looking out for all the elements of a valid contract
		Pricing
		Project objectives
		Scope of works or assignment
		Scrutiny of contract provisions on issues such as dispute resolution
		Termination clauses
		Value for Money
		Doing due diligence on foreign contractors
		Implementing contract review outcomes
		Multi-sectoral Committee to report to Sector Ministry
		Submitting contract documents for review
	<i>Factors Influencing DRM Selection</i>	Comfort of Contractors
		Confidence in the infrastructure for settlement
		Nature of Parties
		Confidence in the mechanism
		Neutrality
		Cost
		Fairness
		Strong reservation

Themes	Categories/Sub-categories	Codes
		Value of Project
		Weighing the factors -Cost v. Confidence in mechanism and process
		Investment protection
		Cost v. nature of transaction
		One-sided consideration
		Lack of knowledge
		Donor choice
		International best practice
		Outcome of Mechanism
		Familiarity of Process to Contractors
		Culture
		State playing a reactive role in choice of mechanisms
	Claim events & Causes of Disputes	
	Claim Events	Change of scope of work
		Political interference
		Delayed payment
		Design changes
		Delays
		Extra work
		Ground conditions
		Inadequate engineering studies on project

Themes	Categories/Sub-categories	Codes
		Inclement weather affecting work
		Incomplete design issues
		Laxity in contract administration
		Poor definition of the scope
		Poor preparation of contracts
		Poor project preparation linked to cost
		Site possession-Access to site
		Non-compliance with condition precedents
		Negative effect of traditional procurement methods
		Lack of coordination
	Causes of Disputes	Breach of Contract
		Client interference
		Consequences of breach of contract
		Delayed payments
		Non-performance
		Uncertain contract provisions
		Indexicality
		Failure to communicate with contractors
		Material failure during warranty period
		Disregard of contract provisions

Themes	Categories/Sub-categories	Codes
		Laxity in contract administration
		Non-payment
		Malfunctioning of joint-ventures
	<i>Disputes</i>	Paying attention to disputes
		Meaning of disputes
		Nature of construction disputes
		Inevitability
		Dispute frequency
		No disputes
		Consequences of Disputes
	Meaning of Disputes	Differences
		Client's delay in making a decision over a long period
		Client's indecision on a claim
		Client's failure to give the Contractor feedback on claim within a reasonable time
		Clients blatant disregard of Contractor's claim
		Dispute after engineer's decision is rejected
		Pending issues between Client and Contractor
		When a claim is rejected by the engineer
		Disagreement
		Non-payment

Themes	Categories/Sub-categories	Codes
	Settling Claims - The Engineer's role	Face-to-face meeting after notice is served
		Post-notice of claim – DUR
		Engineer or Consultant's role
		Keeping up to date records of claim
		Definition of claims
		Maintaining relationship as a basis for dropping claims
		Claim minimization policy
		Using ext. of time -non-monetary claim strategy
		Lack of knowledge of the law
		Dropping - suspending the claims
	Procurement	Procurement strategies
		Procurement history
		Funders-Influencing process
		Procurement methods
		Linking Procurement to dispute resolution
		Making procurement decisions
		Procurement procedure
		Tendering and Consultant & Contractor Selection Methods
		Deficiencies with the current procurement
		Lack of Innovation in

Themes	Categories/Sub-categories	Codes
	<i>Procurement strategies</i>	Procurement
		Default strategies –donor driven procurement
		Unsolicited Proposals
		PPP as a strategy
		PPP-rationale
	<i>Procurement methods</i>	Traditional Methods
		Integrated methods –design and build
		Integrated method –EPC
		Collaborative methods -PPP
	<i>Tendering and Consultant & Contractor Selection Methods</i>	Procurement by MOU distinguished from Sole sourcing
		Sole Sourcing major projects
		Open Tendering
		Selective tendering
	<i>Sole Sourcing/single source procurement</i>	Challenges with Sole sourcing
		Rationale for VfM audit
		Procurement by MOU
		Procedure for Sole sourcing
		VfM audit –procurement
		Considering dispute clauses in VfM audit
Dispute Resolution Process	Dispute resolution mechanisms (DRMs)	
	<i>DRMs regularly used</i>	Engineer's determination

Themes	Categories/Sub-categories	Codes
		Negotiations
		International Commercial Arbitration (ICA)
	<i>ICA</i>	Selection and use of ICA
		Cost
		Negative perceptions about ICA
		Delays
		Perception of bias against developing countries
		Playing victims
	<i>Selection and use of ICA</i>	Funding requirements
		Confidence in the mechanism
		Value of project
		Confidence in the infrastructure for resolution
		Binding outcome
		Enforceability
		Nature of Parties
		Fairness
		Strong reservation
		Investment protection
		International best practice
		Familiarity of process to contractors
		Comfort of contractors
		Neutrality

Themes	Categories/Sub-categories	Codes
	<i>Cost</i>	Arbitration too expensive
		Cost of arbitration incentive for ADR practice in Ghana
	<i>Negative perceptions about ICA</i>	Wasting money and time
		Arbitration-challenges
		Benefitting project executors not Employer
		Destroying relationships
		Arbitration not helpful to Employer all these years
		ICA-terrible
		Bad international publicity for Employer
		ICA process aimed at embarrassing Employer
	<i>Negotiations</i>	Negotiations
		Amicable settlement
		Preliminary discussions
	<i>Why Negotiations</i>	Effectiveness
		Fear of trying something new
		Lack of training
		Lack of exposure to other DRMs
		Lack of knowledge and expertise
		Natural first choice
	<i>DRMs rarely used</i>	Mediation
		DAB

Themes	Categories/Sub-categories	Codes
		Conciliation
		DRB
		Independent experts
		Adjudication
		Expert determination
	<i>Mediation</i>	Mediating Major Project dispute - an example
	<i>DAB</i>	Why DABs not set up
	<i>Litigation</i>	Litigation not a preferred choice
		Litigation favoured by some other businesses
		Favouring litigation-rationale
	<i>Adjudication</i>	Procedure
	<i>DRMs not in agreement but in use</i>	Informal resolution
	<i>Informal resolution</i>	Politically tainted settlements
		Forced settlement
		Buy-outs
		Involving management
	<i>Abstract concepts on dispute resolution –sense making</i>	Conceptual hooks
		Strategic positioning
		Game playing
	<i>Game playing</i>	Acceleration
		Deceleration
		Information game

Themes	Categories/Sub-categories	Codes
		Carrot and stick
		Power play
		Brinkmanship
		Arm twisting
		Calling off bluffs
		Tactical neglect
		Burnt fingers
		Playing hardball
		Playing the past benefit card
		Threat of blacklist
	Procedure	General Procedure
		Engineer/Consultant's role
		Face to face meetings
		Post-notice of claim
		Site meeting
Consequences	Consequences of the Extant Dispute resolution process	Cost of Arbitration too expensive
		Cost of Arb incentive for DRM practice in Ghana
		Delays
		Destroying relationships
		Dropping - suspending pursuit of disputes
		Dropping - suspending pursuit of disputes due to Lack of knowledge of the law
		Maintaining relationship as a basis for dropping claims

Themes	Categories/Sub-categories	Codes
		Few disputes
		The Artesian Well-Scenario – Likely future impact
Remedial Strategies	Increased use of DRMs	Negotiations
		Mediation
		DAB
		Conciliation
		Producing ADR specific clauses for use
		Promotion of ADR
	Required Policy changes	Formalizing the use of multi-sectoral committees through policy
		Further research -what is the cost of disputes & Resolution
		Making a Case for a firm stance on dispute resolution choices
		Open support by the judiciary of DRM decisions
		Policy and or guidelines on dispute resolution
		Policy and or guidelines on dispute resolution – Rationale
		Policy revision on contract review, negotiation and approval
		Policy on dispute handling and resolution at the AGs
		Policy on dispute resolution advocated

Themes	Categories/Sub-categories	Codes
		Sanctioning lax officials
		Setting a threshold
	Dispute Avoidance and reduction	Claims minimization policy
		Dispute Avoidance strategy - using PAB
		Due diligence & culture familiarity
		Effective contract preparation
		Improved contract administration providing early warning signals
		Linking pre-contractual negotiations & contract administration lapses to claim and dispute reduction
		Negotiating stepped delivery of possession of site
		Pay attention to pre-contractual negotiations
		Paying attention to dispute resolution at the front end
		Quick resolution of an emerging dispute
		Regular Project Meetings
		Seeking legal advice early
		Sorting out compensation issues ahead of projects
		Team work
		Understanding Contracts before signing them
		Introducing new contract

Themes	Categories/Sub-categories	Codes
	Education and Training	provisions to address previous challenges
		Capacity building
		Education
		Developing local expertise in Arbitration
		Learning from past experience
		Training for Government personnel
		Training for lawyers
		Promotion of DRMs
		Operationalizing Knowledge
		Transfer of expertise
	Front-end ordering	Paying attention to dispute resolution at the front end – Employer
		Understanding Contracts before signing them
		Effective contract preparation
		Team work
		Negotiating stepped delivery of possession of site
		Pay attention to pre-contractual negotiations
		Consider DR clauses before Agreeing to use them
		Producing standard ADR Clauses for contracts
		Introducing a new contract provision as a result of an experience had

Themes	Categories/ <i>Sub-categories</i>	Codes
	Setting standards for DRM use	DRM Practice - Weighing your options
		Cost-benefit analysis v. Public accountability
		Condition for amicable settlement- cost –benefit
		Conciliation
		DAB

Appendix E- List of Interviewees and their Code Names

Code	Professional Background	Case Affiliation
CPA 1	Law	Employer
CPA 2	Law	Employer
CPA3	Law	Employer
CPA4	Law	Employer
CPA 5	Law	Employer
CPA 6	Law	Employer
CPA7	Law	Employer
CPR 1	Law	Employer
CPR2	Quantity Surveying	Employer
CPR 3	Engineering	Employer
CPR 4	Engineering	Employer
CPR 5	Quantity Surveying	Employer
CPR 6	Engineering	Employer
CPR 8	Engineering	Employer
CPR9	Engineering	Employer
CPR10	Quantity Surveying	Employer
CPW 1	Law	Employer
CPW2	Quantity Surveying	Employer
CPW3	Law	Employer
CPW4	Engineering	Employer
CPW5	Engineering	Employer
CPW6	Engineering	Employer
CPW7	Hydrology	Employer
CPW8	Hydrology	Employer

Code	Professional Background	Case Affiliation
CPE 1	Law	Employer
CPE3	Law	Employer
CPE2	Law	Employer
CPE4	Engineering	Employer
CPE 5	Engineering	Employer
CPE6	Engineering	Employer
CPE 7	Engineering	Employer
CPW 9	Quantity Surveying	Employer
CPW 10	Quantity Surveying	Employer
CPW 11	Quantity Surveying	Employer
CPP	Finance	Employer
APC	Engineering	Contractors
CPF 2	Law	Employer
CPF3	Law	Employer
CPF4	Law	Employer
CPF5	Economics	Employer
CPF6	Finance	Employer
CPF1	Law	Employer
CPP1	Law	Employer
CPP2	Quantity Surveying	Employer
APB 1	Law	Contractors
APB2	Law	Contractors
APA	Law	Contractors
APT	Law	Contractors
APN	Law	Contractors

Code	Professional Background	Case Affiliation
APE	Engineering	Contractors
EP 1	Quantity Surveying	Contractors
EP2		Contractors
CPE	Law	Employer
APF	Law	Contractors
EP3	Engineering	Contractors
APG	Law	Contractors

Appendix F - Sample Code Memo

Settling Claims

29 September, 2012 6:01PM

Settlement of claims in the major construction industry in Ghana is not a straight forward subject. The various conditions of contract provide claim procedure to be followed in case a party to the contract chooses to make a claim. The Conditions of Contract also determine the conditions under which a claim will be admitted and processed. In the context of Ghana, practice as identified through the interviews conducted differ depending on the MDA involved. What is common among all the MDAs is that the claim or dispute procedure is multi-sectorial. It may start with the resident engineer on the particular project, proceed to the Agency, Authority or company responsible for the project, then proceed further to the sector ministry involved in the project and sometimes the Attorney - General's Department. A prudent treatment of the subject may require a sectorial approach. The aim is to find out whether there is any significant difference in approach. In this regard, this work will examine the procedure of claim by responsible institutions under three sectors noted for major infrastructure project execution. These sectors are road, water and energy.

The Road Sector

The main entities involved in claim processing in the road sector are the Ministry of Roads and Highways (MRH) representing the State as the Client and the Ghana Highway Authority (GHA) which acts as the Client's representative and the Engineer on such projects. The GHA will often have a resident Engineer directly responsible for the supervision of the project or a private consultant who will still be reporting to the GHA. In both cases, the practice is in line with the provisions of Clause 2.2 and 2.3 of the 1987 FIDIC Conditions for Civil Engineering Works (1987 Red book) and Clause

3.1&2 of the 1999 FIDIC Conditions of Contract for Building and Engineering Works designed by the Employer (the Red book, 1999). The claim procedure in practice within the road sector very much reflect the procedure outlined under Clause 53 of the FIDIC Conditions of Contract for work, 1987 which is the dominant conditions of contract in use in the road sector. In recent times, the industry has seen a gradual introduction of contracts based on the FIDIC 1999 conditions. The former however remains dominant.

The first point of call for any claim remains the Engineer or his representative who is either a resident Engineer for the particular project or a private consultant employed to oversee the execution of the project (EP3). In the case of major road projects in Ghana, the data obtained reveals that most such projects will have either a resident engineer or a private consultant on the ground. Both the resident engineer and the private engineer report to GHA which is the Engineer for these projects. The only exception is with the EU Conditions where a private consultant reports to the national authorising officer and not GHA. The contractor is also required to serve a copy of the claim on the Client, which is the MRT. The resident engineer or the consultant receiving the notice of claim and the evidence in support are required to ensure that the contractor has complied with the requirements of the contract. A participant, who is currently a resident engineer on a project, shared his experience:

Let us take the project supervision that I am handling right now, when there is a claim, [it] is submitted to the office of the resident engineer. Now the resident engineer will receive the claim. But first of all there are certain conditions that the contractor or the claimant should meet and if those conditions are not met we can reject the claim outright. For any occasion giving rise to that claim, the engineer

should have been notified in advance that this is what is happening and it is likely to result in a claim.

A claim made by a contractor must comply with Clause 53 of the FIDIC 1987 Condition of contract or Clause 20(1) of the FIDIC 1999 especially the timelines. An official with enormous expertise in the area of claims in the road sector, described the practice in the following terms:

I mean before we admit any claim, we must ensure that it satisfies the claim procedure so that's what we tell our people on projects. We normally hold seminars from time to time and claim is an issue which we discuss. We tell them that, from day one they can stop – some of these claims are rather frivolous, they are afterthoughts if you are supposed to give notice within twenty-eight days; provide details within twenty-eight days and the engineer is supposed to start taking his records – your notice is to get the engineer informed that something is going wrong, he can stop it – he better stop it and avoid any escalation of the situation so if you don't follow those things when your claim comes, they will knock it out.

Once a claim is received, it is the responsibility of the resident engineer or the consultant to vet the claim, request for supporting information and write an opinion indicating whether or not the claim is justified. At this stage, the resident engineer or consultant can intervene to stop the claim from proceeding further, if there is justification for such a step, through initial discussions with the contractor. CPR8 gave an example of such an intervention which resulted in a claim running into several millions of US dollars being withdrawn. When the resident engineer or the contractor is ready with his opinion, this is forwarded to GHA. The practice confirmed by a number of experienced persons in management within the road sector is that when the resident engineer's report is received, a team is constituted at the GHA to examine the

resident engineer's opinion as against the claims from the contractor. At this stage, the resident engineer still has the opportunity to further explain his position. Other experts in cost and contract also have the opportunity to examine the claims as against the opinion of the consultant or the resident engineer. If there is the need for further particulars or evidence to be sought from the contractor, this is done.

Some participants indicated that in some cases, the contractor is also invited and heard again. The aim of this invitation is to attempt to reach a position acceptable to both parties. In such cases, the issue may be resolved and the parties' agreed position will be captured as the settlement for the claims in issue. Where the informal settlement efforts afore-described fail or do not take place at all, then the normal procedure is as follows: After a thorough deliberation, the opinion of the resident engineer is either accepted, modified or substantially altered depending on the conclusions of the team at GHA. The engineer's determination is subsequently prepared and this may indicate that the client is entitled to his claim, entitled to part of it or is not entitled at all. There was an indication that the engineer's determination is forwarded to the Client or Employer, the MRH, especially when it involves payment of additional money. The MRH's comments are considered and the final position agreed is communicated as the engineers' determination to the Contractor. If the engineer's determination is accepted by the contractor, the claim is deemed settled. If it is rejected or contested by the contractor, a dispute is deemed to have emerged (CPR1, 4, 5 8&9).

Appendix G - Line-by-line coding an impractical tedium for this work

10-Oct-12 12:33 PM

The initial data collection process was guided by the research objectives. These interviews therefore produced a somewhat chunked information along the lines of the initial sensitizing concepts which albeit flowed coherently as the story of the participants on their experiences with dispute resolution. After initial data had been collected the immediate challenge was how to get the analysis going. Turning to the literature on grounded theory, the overwhelming suggestion was for the researcher to start with some initial analysis referred to as open coding (Corbin & Strauss, 1990) or substantive coding (Glaser & Strauss, 1967; Glaser, 1978). Most of the literature on the subject agrees on an initial coding process though there are considerable differences in how this is to be done. Corbin and Strauss (2008) suggest line-by-line initial coding. Charmaz (2006) expand the list to include word-by-word coding and incident -by- incident coding. The choice of initial coding strategy is however left to the researcher to make. Heath and Crowley (2004) like many other grounded theory researchers faced with this challenge opted for neither line-by-line coding nor casual notes on data. The former had the potential to produce what they referred to as "word overload" whilst the latter was likely to be pedestrian and superficial. The issues was how detailed should the analysis be at this stage? They chose an approach akin to paragraph -by- paragraph coding where one or two key themes remain the focus.

The analysis in this study commenced with a line-by-line coding. Having used this strategy for some time, some disadvantages have become obvious. Firstly, for time-bound projects, this approach is impractical as it is time-consuming and confusing (see Allan, 2003). Secondly, word overload led to the relevant issues being drowned in the researcher's indulgence in the micro-analysis. Finally, some lines, standing alone, carried very little value in terms of conceptual contribution to the work.

A combination of paragraph -by- paragraph coding and incident -by incident coding have been found to be more realistic and useful. Key ideas contained in such paragraphs are either giving in vivo codes or generated codes. In some cases chunks of data dealing with a specific incident is all together coded under a concept deducible from the narration of the incident.

Appendix G 1- A Return to Line-by-line coding inevitable in certain circumstances

15-Oct-12 2:11 PM

After identifying a considerable number of codes from a number of interviews, axial coding commenced coupled with memoing. The intention was to use the memoing process to aid in the raising of axial codes or categories and identifying their sub-categories. This process meant revisiting some of the earlier data chunks coded. As the process of reading over previously coded data chunks progressed, the process of re-coding portions of these previously chunked data became inevitable. Earlier chunks of data contained other rich information previously not identified. These pieces of information contained additional properties and dimensions of emerging categories obviously embedded in the data. Line-by-line coding became inevitable as it has the potential to enrich the coding process. Its relevance is most conspicuous as already coded data are re-read and analysed (Charmaz, 2006).

Appendix H – Request for Feedback on Findings (Interviewees)

Dear Sir/ Madam,

Re: Research on the Resolution of Construction Disputes arising from Major Infrastructure Projects in Developing Countries – Request for Feedback on Findings

I wish to express my appreciation to you once again for your participation in the data collection process I embarked upon sometime between April and July, 2012 as part of my PhD research on the above-mentioned subject. As you will recall, the aim of the research was to critically examine the Ghanaian experience of resolution of construction disputes arising from major infrastructure projects and thereby develop strategies for efficient and effective resolution.

A number of findings have since been made on the basis of analysis of the data collected. The findings identify the nature of the extant dispute resolution process, factors accounting for it and strategies for reform (see attached Summary of Findings). It is expected that the findings of the research will contribute to the on-going discourse on effective dispute resolution and offer suggestions to improve the extant resolution process.

Consequently, I would be grateful if you could respond to the three questions at the end of the attached Summary of Findings. Your response will help establish the trustworthiness of the research outcome. Kindly send your response to me by electronic mail (j.mante@wlv.ac.uk or ormantecj@gmail.com) or by post at the following address:

Joseph Mante

Room MI 228

School of Technology

University of Wolverhampton

WV1 1LY, United Kingdom

Mobile: +447551 908 364

Alternatively, feedback by telephone or Skype will be appreciated. Please notify me by email if this is your preferred option so arrangements can be made for such an interaction.

I will appreciate if your feedback can reach me by **7th February, 2014**.

As was the case with the interviews, any feedback or comment provided shall remain confidential.

I await your response. Thank you in advance.

Yours Faithfully,
Joseph Mante